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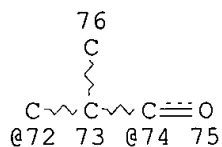
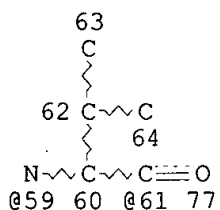
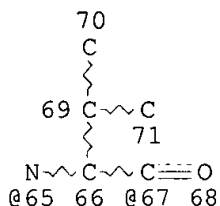
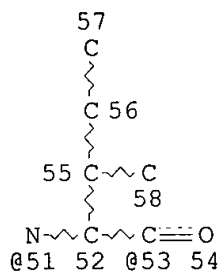
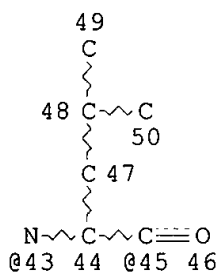
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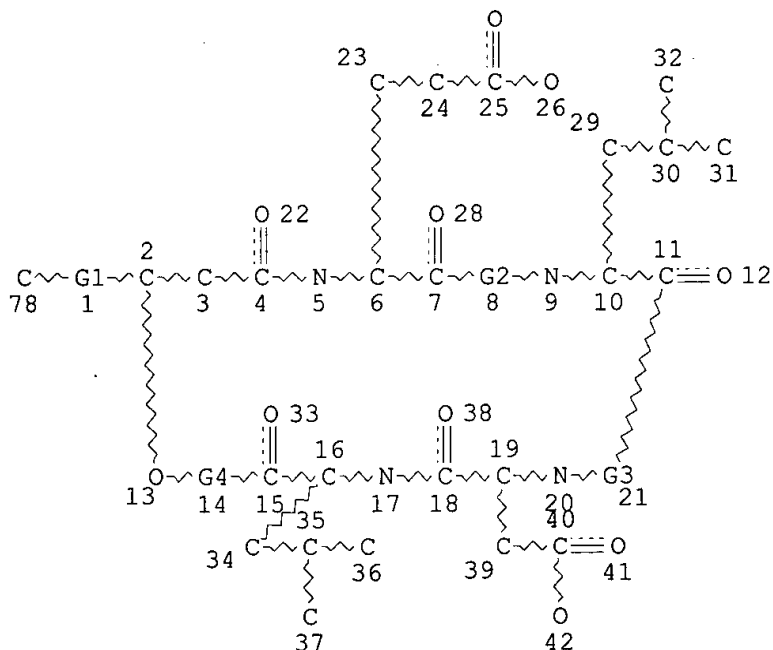
FILE COVERS 1907 - 28 Apr 2003 VOL 138 ISS 18  
 FILE LAST UPDATED: 27 Apr 2003 (20030427/ED)

This file contains CAS Registry Numbers for easy and accurate substance identification.

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Page 2-A

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VAR G2=43-7 45-9/51-7 53-9/59-7 61-9

VAR G3=65-11 67-20/72-11 74-20

VAR G4=43-15 45-13/51-15 53-13/59-15 61-13

NODE ATTRIBUTES:

DEFAULT MLEVEL IS ATOM

DEFAULT ECLEVEL IS LIMITED

GRAPH ATTRIBUTES:

RING(S) ARE ISOLATED OR EMBEDDED

NUMBER OF NODES IS 78

STEREO ATTRIBUTES: NONE

L13 117 SEA FILE=REGISTRY SSS FUL L12

L14 209 SEA FILE=HCAPLUS ABB=ON PLU=ON L13

L15 7 SEA FILE=HCAPLUS ABB=ON PLU=ON L14 AND (?VIRAL? OR ?VIRUS?  
OR ?VIRIS?)

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L15 ANSWER 1 OF 7 HCAPLUS COPYRIGHT 2003 ACS

ACCESSION NUMBER: 2002:314746 HCAPLUS

DOCUMENT NUMBER: 136:330564

TITLE: Lipid-protein-sugar microparticles for drug delivery

INVENTOR(S): Kohane, Daniel S.; Lipp, Michael M.; Langer, Robert S.

PATENT ASSIGNEE(S): Massachusetts Institute of Technology, USA

SOURCE: PCT Int. Appl., 84 pp.

CODEN: PIXXD2

DOCUMENT TYPE: Patent

LANGUAGE: English

FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2002032398	A2	20020425	WO 2001-US32378	20011016
WO 2002032398	A3	20030109		
W: CA, JP				
RW: AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, TR				
US 2002150621	A1	20021017	US 2001-981020	20011016
PRIORITY APPLN. INFO.:		US 2000-240636P P 20001016		
AB Lipid-protein-sugar microparticles (LPSPs) are provided as a vehicle for drug delivery. Any therapeutic, diagnostic, or prophylactic agent may be encapsulated in a lipid-protein-sugar matrix to form microparticles. Preferably the diam. of the LPSP ranges from 50 to 10 .mu.m. The particles may be prepd. by using any known lipid (e.g., DPPC), protein (e.g., albumin), or sugar (e.g., lactose). Methods of prepg. and administering the particles are also provided. Methods of providing a nerve block are also provided by administering LPSPs with a local anesthetic (e.g., bupivacaine) within the vicinity of a nerve. Title microparticles (DPPC-albumin-lactose) were prepd. contg. bupivacaine. The drug release from the particles was complete within 24 h.				
IT 24730-31-2, Surfactin				
RL: THU (Therapeutic use); BIOL (Biological study); USES (Uses) (lipid-protein-sugar microparticles for drug delivery)				

L15 ANSWER 2 OF 7 HCAPLUS COPYRIGHT 2003 ACS

ACCESSION NUMBER: 2002:314744 HCAPLUS

DOCUMENT NUMBER: 136:330527

TITLE: Lipid-protein-sugar particles for delivery of nucleic acids

INVENTOR(S): Kohane, Daniel S.; Anderson, Daniel G.; Langer, Robert S.

PATENT ASSIGNEE(S): Massachusetts Institute of Technology, USA

SOURCE: PCT Int. Appl., 82 pp.  
CODEN: PIXXD2

DOCUMENT TYPE: Patent

LANGUAGE: English

FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2002032396	A2	20020425	WO 2001-US32210	20011016
WO 2002032396	A3	20030206		
W: CA, JP				
RW: AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, TR				
US 2002150626	A1	20021017	US 2001-981460	20011016
PRIORITY APPLN. INFO.:		US 2000-240698P P 20001016		
AB Lipid-protein-sugar particles (LPSPs) are provided as a vehicle for the delivery of nucleic acids. Any polynucleotide (e.g., DNA, RNA) may be encapsulated in a lipid-protein-sugar matrix to form microparticles. Preferably the diam. of the LPSP ranges from 50 nm to 10 .mu.m. The particles may be prepd. using any known lipid (e.g., DPPC), protein (e.g., albumin), or sugar (e.g., lactose). Methods of prepg. the particles and administering the particles for gene therapy are also provided. Preferably the methods of prepg. the LPSPs do not significantly damage the polynucleotide to be delivered.				
IT 24730-31-2, Surfactin				
RL: PEP (Physical, engineering or chemical process); PYP (Physical process); THU (Therapeutic use); BIOL (Biological study); PROC (Process); USES (Uses) (lipid-protein-sugar particles for delivery of nucleic acids)				

L15 ANSWER 3 OF 7 HCAPLUS COPYRIGHT 2003 ACS

ACCESSION NUMBER: 1998:126274 HCAPLUS

DOCUMENT NUMBER: 128:188618

TITLE: **Antiviral** cyclic lipopeptides and their use  
in inactivating lipid envelopped **viruses**INVENTOR(S): Vollenbroich, Dirk; Vater, Joachim; Pauli, Georg;  
Kamp, Roza MariaPATENT ASSIGNEE(S): Vollenbroich, Dirk, Germany; Vater, Joachim; Pauli,  
Georg; Kamp, Roza MariaSOURCE: PCT Int. Appl., 44 pp.  
CODEN: PIXXD2

DOCUMENT TYPE: Patent

LANGUAGE: German

FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 9806744	A1	19980219	WO 1997-EP4353	19970811
W: AU, CA, JP, US				
RW: AT, BE, CH, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE				
DE 19633684	A1	19980219	DE 1996-19633684	19960812
AU 9739433	A1	19980306	AU 1997-39433	19970811
AU 726424	B2	20001109		
EP 918793	A1	19990602	EP 1997-936699	19970811
EP 918793	B1	20020417		
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, PT, IE				
JP 2000516600	T2	20001212	JP 1998-509393	19970811
AT 216399	E	20020515	AT 1997-936699	19970811
ES 2175449	T3	20021116	ES 1997-936699	19970811
US 2002187929	A1	20021212	US 1999-242343	19990412
PRIORITY APPLN. INFO.:			DE 1996-19633684 A	19960812
			WO 1997-EP4353 W	19970811

OTHER SOURCE(S): MARPAT 128:188618

AB The invention relates to an extremely efficient inactivating process for lipid envelopped **virus** such as Herpes **virus** and **retrovirus** in - mainly pharmaceutical - biol. or biotechnol. products and in cell cultures, wherein a cyclic lipopeptide or a lipopeptide mixt. or salts or esters thereof are added in certain concns. It appeared that lipopeptides have a surprisingly strong inactivating power on lipid envelopped **virus** and the addnl. advantage of very low in vivo toxicity, such that eliminating the inactivation agent in pharmaceutical products would no longer be necessary. The invention relates also to new **antivirus** lipopeptides pertaining to the surfactin group. A surfactin mixt. was isolated from *Bacillus subtilis* and the individual surfactins were sepd. and characterized. Four new surfactins were identified. Mono- and diesters of the surfactins were prepd. and tested for **antiviral** activity. Certain monoesters at 40 .mu.M concns. inactivated by a factor of >104 swine **herpesvirus** and Semliki forest **virus** after 20 min incubation. The **virus**-inactivation rate increases linearly as a function of temp.

IT 203726-17-4P 203726-20-9P 203726-23-2P  
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203742-02-3P 203742-04-5P 203742-05-6P

RL: BAC (Biological activity or effector, except adverse); BSU (Biological study, unclassified); PUR (Purification or recovery); SPN (Synthetic

preparation); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); USES (Uses)

(antiviral cyclic lipopeptides and their use in inactivating lipid enveloped viruses)

IT 203726-04-9P 203726-06-1P 203726-09-4P  
203726-12-9P

RL: BAC (Biological activity or effector, except adverse); BSU (Biological study, unclassified); PUR (Purification or recovery); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); USES (Uses)

(antiviral cyclic lipopeptides and their use in inactivating lipid enveloped viruses)

REFERENCE COUNT: 7 THERE ARE 7 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L15 ANSWER 4 OF 7 HCAPLUS COPYRIGHT 2003 ACS

ACCESSION NUMBER: 1997:712089 HCAPLUS

DOCUMENT NUMBER: 127:356916

TITLE: Mechanism of inactivation of enveloped viruses by the biosurfactant surfactin from Bacillus subtilis  
AUTHOR(S): Vollenbroich, Dirk; Ozel, Muhsin; Vater, Joachim; Kamp, Roza Maria; Pauli, Georg

CORPORATE SOURCE: Fachgebiet Biochemie, Molekulare Biologie, Max-Volmer-Institut Biophysikalische Chemie, Technische Universitat Berlin, Berlin, 10587, Germany

SOURCE: Biologicals (1997), 25(3), 289-297

CODEN: BILSEC; ISSN: 1045-1056

PUBLISHER: Academic

DOCUMENT TYPE: Journal

LANGUAGE: English

AB The antiviral activity of surfactin, a cyclic lipopeptide antibiotic and biosurfactant produced by B. subtilis, was detd. for a broad spectrum of different viruses, Semliki Forest virus (SFV), herpes simplex virus (HSV-1, HSV-2), suid herpes virus (SHV-1), vesicular stomatitis virus (VSV), simian immunodeficiency virus (SIV), feline calicivirus (FCV), and murine encephalomyocarditis virus (EMCV). In vitro expts. showed biphasic virus inactivation kinetics for enveloped viruses during treatment. Inactivation of enveloped viruses, esp. herpes- and retroviruses, was much more efficient than that of non-enveloped viruses. For those viruses susceptible to its action, surfactin was active at 25 .mu.M in medium contg. 5% fetal calf serum (FCS). Concns. .ltoreq.80 .mu.M of surfactin led to a titer redn. of >4.4 log10 CCID50/mL for HSV-1 in 15 min and for SIV and VSV in 60 min. The inactivation rate increased linearly with the incubation temp. by a factor 2.4/10.degree. and logarithmically with the concn. Serum components, probably proteins and/or lipids, influence the effective surfactin concn. A disruption of the viral lipid membrane and partially of the capsid was obsd. by electron microscopy. These findings suggest that the antiviral action, postulated also in other investigations, seems to be due to a physicochem. interaction of the membrane-active surfactant with the virus lipid membrane. Surfactin may be useful for application in virus safety enhancement of biotechnol. and pharmaceutical products.

IT 24730-31-2, Surfactin

RL: BAC (Biological activity or effector, except adverse); BSU (Biological study, unclassified); BIOL (Biological study)

(mechanism of inactivation of enveloped viruses by the biosurfactant surfactin from Bacillus subtilis)

L15 ANSWER 5 OF 7 HCAPLUS COPYRIGHT 2003 ACS

ACCESSION NUMBER: 1997:459425 HCAPLUS

DOCUMENT NUMBER: 127:133064

TITLE: Application of surfactin for mycoplasma inactivation in **virus** stocks  
 AUTHOR(S): Nissen, Eberhard; Pauli, Georg; Vater, Joachim; Vollenbroich, Dirk  
 CORPORATE SOURCE: Dep. Virol., Robert Koch Inst., Berlin, 13353, Germany  
 SOURCE: In Vitro Cellular & Developmental Biology: Animal (1997), 33(6), 414-415  
 CODEN: IVCAED; ISSN: 1071-2690  
 PUBLISHER: Society for In Vitro Biology  
 DOCUMENT TYPE: Journal  
 LANGUAGE: English  
 AB A novel procedure for the purifn. of **virus** stocks from mycoplasma contaminations was established using the lipopeptide antibiotic and biosurfactant surfactin.  
 IT **24730-31-2**, Surfactin  
 RL: BUU (Biological use, unclassified); BIOL (Biological study); USES (Uses)  
 (application of surfactin for mycoplasma inactivation in **virus** stocks)

L15 ANSWER 6 OF 7 HCAPLUS COPYRIGHT 2003 ACS

ACCESSION NUMBER: 1997:16696 HCAPLUS  
 DOCUMENT NUMBER: 126:73828  
 TITLE: Antimycoplasma properties and application in cell culture of surfactin, a lipopeptide antibiotic from *Bacillus subtilis*  
 AUTHOR(S): Vollenbroich, Dirk; Pauli, Georg; Oezel, Muhsin; Vater, Joachim  
 CORPORATE SOURCE: Max-Volmer-Institut fur Biophysikalische Chemie und Biochemie, Fachgebiet Biochemie und Molekulare Biologie, Technische Universitat Berlin, Berlin, 10587, Germany  
 SOURCE: Applied and Environmental Microbiology (1997), 63(1), 44-49  
 CODEN: AEMIDF; ISSN: 0099-2240  
 PUBLISHER: American Society for Microbiology  
 DOCUMENT TYPE: Journal  
 LANGUAGE: English  
 AB Surfactin, a cyclic lipopeptide antibiotic and biosurfactant produced by *B. subtilis*, is well-known for its interactions with artificial and biomembrane systems (e.g., bacterial protoplasts or enveloped **viruses**). To assess the applicability of this **antiviral** and antibacterial drug, the cytotoxicity of surfactin with a 50% cytotoxic concn. of 30-64 .mu.M for a variety of human and animal cell lines was detd. in vitro. Concomitantly, improvements in proliferation rates and changes in the morphol. of mycoplasma-contaminated mammalian cells were obsd. after treatment with this drug. A single treatment over 1 passage led to complete removal of viable Mycoplasma hyorhina cells from various adherent cell lines, and Mycoplasma orale was removed from nonadherent human T-lymphoid cell lines by double treatment. This effect was monitored by a DNA fluorescence test, an ELISA, and 2 different PCR methods. Disintegration of the mycoplasma membranes as obsd. by electron microscopy indicated the mode of action of surfactin. Disintegration is obviously due to a physicochem. interaction of the membrane-active surfactant with the outer part of the lipid membrane bilayer, which causes permeability changes and at higher concns. leads finally to disintegration of the mycoplasma membrane system by a detergent effect. The low cytotoxicity of surfactin for mammalian cells permits specific inactivation of mycoplasmas without significant deleterious effects on cell metab. and the proliferation rate in cell culture. These results were used to develop a fast and simple method for complete and permanent inactivation of mycoplasmas in mammalian monolayer and suspension cell cultures.

IT 24730-31-2, Surfactin

RL: BAC (Biological activity or effector, except adverse); BSU (Biological study, unclassified); BUU (Biological use, unclassified); BIOL (Biological study); USES (Uses)

(antimycoplasma properties and application in cell culture of surfactin)

L15 ANSWER 7 OF 7 HCAPLUS COPYRIGHT 2003 ACS

ACCESSION NUMBER: 1994:502344 HCAPLUS

DOCUMENT NUMBER: 121:102344

TITLE: Structural and conformational studies of [Ile7] and [Leu7]surfactins from Bacillus subtilis natto

AUTHOR(S): Itokawa, Hideji; Miyashita, Toshihiko; Morita, Hiroshi; Takeya, Koichi; Hirano, Toshihiko; Homma, Masato; Oka, Kitao

CORPORATE SOURCE: Tokyo Coll. Pharm., Hachioji, 192-03, Japan

SOURCE: Chemical & Pharmaceutical Bulletin (1994), 42(3), 604-7

CODEN: CPBTAL; ISSN: 0009-2363

DOCUMENT TYPE: Journal

LANGUAGE: English

AB A novel [Ile7]surfactin, which showed anti-human immunodeficiency virus activity, has been isolated from Bacillus subtilis natto. Structural and conformational anal. of the peptide backbone of [Ile7]surfactin was conducted by a combination of various two-dimensional (2D) NMR, CD spectroscopy and simulated annealing calcns., compared with a known [Leu7]surfactin. Both surfactins were shown to exist in different conformational states in both polar and apolar solvents.

IT 24730-31-2, Surfactin 136109-78-9

RL: PRP (Properties)

(structure and conformation of, of Bacillus subtilis natto)

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FILE 'REGISTRY' ENTERED AT 14:15:19 ON 28 APR 2003

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STRUCTURE FILE UPDATES: 27 APR 2003 HIGHEST RN 506405-59-0

DICTIONARY FILE UPDATES: 27 APR 2003 HIGHEST RN 506405-59-0

TSCA INFORMATION NOW CURRENT THROUGH JANUARY 6, 2003

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Crossover limits have been increased. See HELP CROSSOVER for details.

Experimental and calculated property data are now available. See HELP PROPERTIES for more information. See STNnote 27, Searching Properties in the CAS Registry File, for complete details:

<http://www.cas.org/ONLINE/STN/STNOTES/stnotes27.pdf>

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L16 ANSWER 1 OF 33 REGISTRY COPYRIGHT 2003 ACS

RN **203742-05-6** REGISTRY

CN L-Valine, N-(3-hydroxy-1-oxohexadecyl)-L-.alpha.-glutamyl-L-isoleucyl-D-leucyl-L-valyl-L-.alpha.-aspartyl-D-leucyl-, (7.fwdarw.1)-lactone, 1(or 5)-methyl ester (9CI) (CA INDEX NAME)

FS PROTEIN SEQUENCE; STEREOSEARCH

MF C54 H95 N7 O13

CI IDS

SR CA

LC STN Files: CA, CAPLUS, TOXCENTER, USPATFULL

\*\*RELATED SEQUENCES AVAILABLE WITH SEQLINK\*\*

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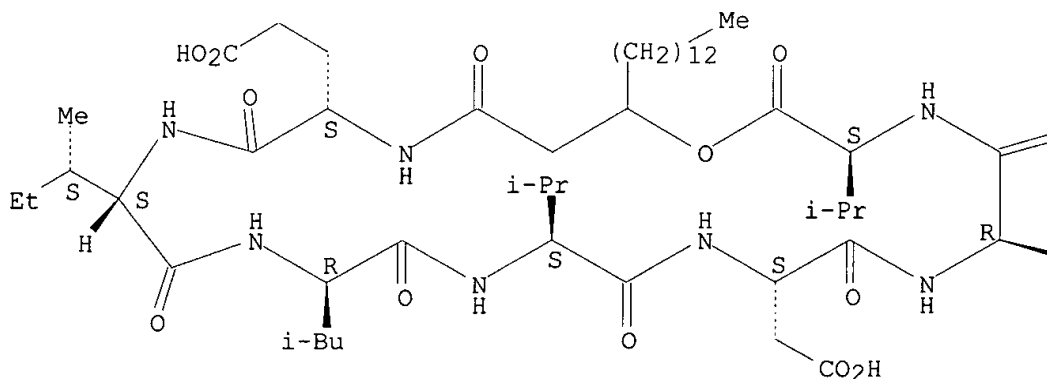
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CMF C53 H93 N7 O13

\*\*RELATED SEQUENCES AVAILABLE WITH SEQLINK\*\*

Absolute stereochemistry.

PAGE 1-A



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CM 2

CRN 67-56-1

CMF C H4 O

 $\text{H}_3\text{C-OH}$ 

1 REFERENCES IN FILE CA (1957 TO DATE)

1 REFERENCES IN FILE CAPLUS (1957 TO DATE)

REFERENCE 1: 128:188618

L16 ANSWER 2 OF 33 REGISTRY COPYRIGHT 2003 ACS

RN 203742-04-5 REGISTRY

CN L-Leucine, N-(3-hydroxy-1-oxohexadecyl)-L-.alpha.-glutamyl-L-leucyl-D-leucyl-L-valyl-L-.alpha.-aspartyl-D-leucyl-, (7.fwdarw.1)-lactone, 1(or 5)-methyl ester (9CI) (CA INDEX NAME)

FS PROTEIN SEQUENCE; STEREOSEARCH

MF C55 H97 N7 O13

CI IDS

SR CA

LC STN Files: CA, CAPLUS, TOXCENTER, USPATFULL

\*\*RELATED SEQUENCES AVAILABLE WITH SEQLINK\*\*

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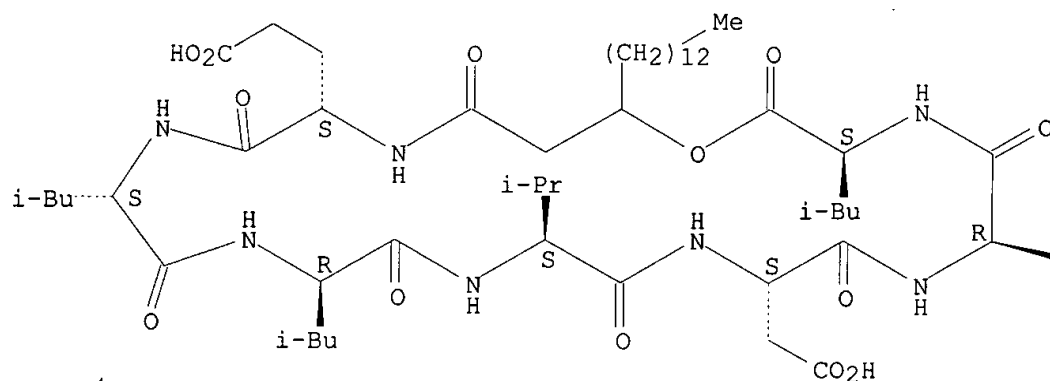
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CMF C54 H95 N7 O13

\*\*RELATED SEQUENCES AVAILABLE WITH SEQLINK\*\*

Absolute stereochemistry.

PAGE 1-A



PAGE 1-B

Bu-i

CM 2

CRN 67-56-1

CMF C H4 O

H<sub>3</sub>C-OH

1 REFERENCES IN FILE CA (1957 TO DATE)

1 REFERENCES IN FILE CAPLUS (1957 TO DATE)

REFERENCE 1: 128:188618

L16 ANSWER 3 OF 33 REGISTRY COPYRIGHT 2003 ACS

RN **203742-02-3** REGISTRY

CN L-Valine, N-(3-hydroxy-1-oxohexadecyl)-L-.alpha.-glutamyl-L-leucyl-D-leucyl-L-valyl-L-.alpha.-aspartyl-D-leucyl-, (7.fwdarw.1)-lactone, 1(or 5)-methyl ester (9CI) (CA INDEX NAME)

FS PROTEIN SEQUENCE; STEREOSEARCH

MF C54 H95 N7 O13

CI IDS

SR CA

LC STN Files: CA, CAPLUS, TOXCENTER, USPATFULL

\*\*RELATED SEQUENCES AVAILABLE WITH SEQLINK\*\*

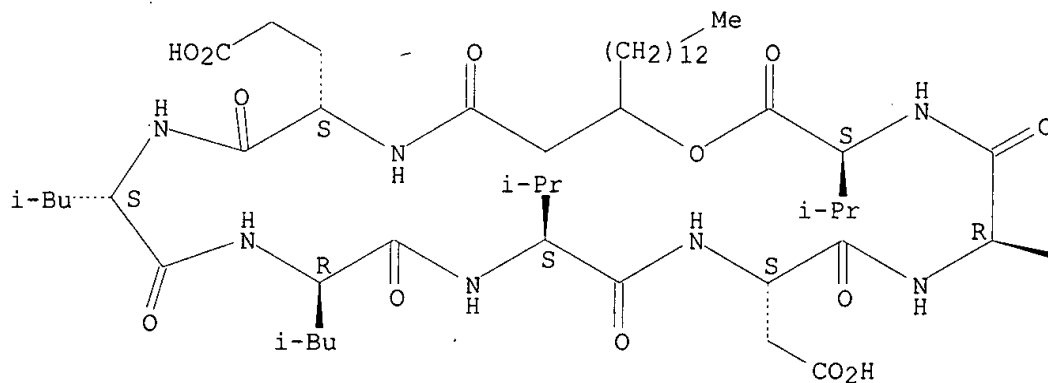
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CMF C53 H93 N7 O13


\*\*RELATED SEQUENCES AVAILABLE WITH SEQLINK\*\*

Absolute stereochemistry.

PAGE 1-A



PAGE 1-B

 Bu-i

CM 2

CRN 67-56-1  
CMF C H4 O

H<sub>3</sub>C-OH

1 REFERENCES IN FILE CA (1957 TO DATE)  
1 REFERENCES IN FILE CAPLUS (1957 TO DATE)

REFERENCE 1: 128:188618

L16 ANSWER 4 OF 33 REGISTRY COPYRIGHT 2003 ACS

RN 203742-00-1 REGISTRY

CN L-Isoleucine, N-(3-hydroxy-1-oxooctadecyl)-L-.alpha.-glutamyl-L-isoleucyl-D-leucyl-L-valyl-L-.alpha.-aspartyl-D-leucyl-, (7.fwdarw.1)-lactone, 1(or 5)-methyl ester (9CI) (CA INDEX NAME)

FS PROTEIN SEQUENCE; STEREOSEARCH

MF C57 H101 N7 O13

CI IDS  
 SR CA  
 LC STN Files: CA, CAPLUS, TOXCENTER, USPATFULL

\*\*RELATED SEQUENCES AVAILABLE WITH SEQLINK\*\*

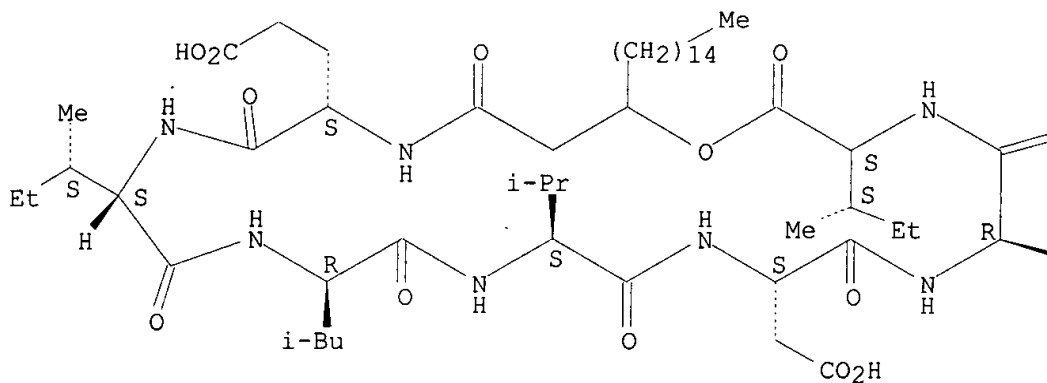
CM 1

CRN 203726-12-9  
 CMF C56 H99 N7 O13

\*\*RELATED SEQUENCES AVAILABLE WITH SEQLINK\*\*

Absolute stereochemistry.

PAGE 1-A



PAGE 1-B

=O

≡ Bu-i

CM 2

CRN 67-56-1  
 CMF C H4 O

H<sub>3</sub>C-OH

1 REFERENCES IN FILE CA (1957 TO DATE)  
 1 REFERENCES IN FILE CAPLUS (1957 TO DATE)

REFERENCE 1: 128:188618

L16 ANSWER 5 OF 33 REGISTRY COPYRIGHT 2003 ACS  
 RN 203741-99-5 REGISTRY  
 CN L-Isoleucine, N-(3-hydroxy-1-oxooctadecyl)-L-.alpha.-glutamyl-L-leucyl-D-leucyl-L-valyl-L-.alpha.-aspartyl-D-leucyl-, (7.fwdarw.1)-lactone, 1(or 5)-methyl ester (9CI) (CA INDEX NAME)  
 FS PROTEIN SEQUENCE; STEREOSEARCH  
 MF C57 H101 N7 O13  
 CI IDS  
 SR CA  
 LC STN Files: CA, CAPLUS, TOXCENTER, USPATFULL

\*\*RELATED SEQUENCES AVAILABLE WITH SEQLINK\*\*

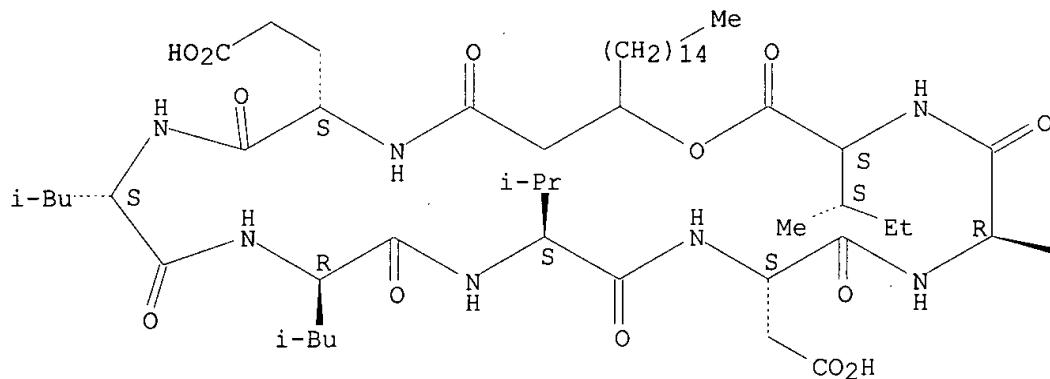
CM 1

CRN 203741-98-4  
 CMF C56 H99 N7 O13

\*\*RELATED SEQUENCES AVAILABLE WITH SEQLINK\*\*

Absolute stereochemistry.

PAGE 1-A



PAGE 1-B

≡ Bu-i

CM 2

CRN 67-56-1  
 CMF C H4 O

H<sub>3</sub>C-OH

1 REFERENCES IN FILE CA (1957 TO DATE)  
 1 REFERENCES IN FILE CAPLUS (1957 TO DATE)

REFERENCE 1: 128:188618

L16 ANSWER 6 OF 33 REGISTRY COPYRIGHT 2003 ACS

RN 203741-97-3 REGISTRY

CN L-Valine, N-(3-hydroxy-1-oxooctadecyl)-L-.alpha.-glutamyl-L-isoleucyl-D-leucyl-L-valyl-L-.alpha.-aspartyl-D-leucyl-, (7.fwdarw.1)-lactone, 1(or 5)-methyl ester (9CI) (CA INDEX NAME)

FS PROTEIN SEQUENCE; STEREOSEARCH

MF C56 H99 N7 O13

CI IDS

SR CA

LC STN Files: CA, CAPLUS, TOXCENTER, USPATFULL

\*\*RELATED SEQUENCES AVAILABLE WITH SEQLINK\*\*

CM 1

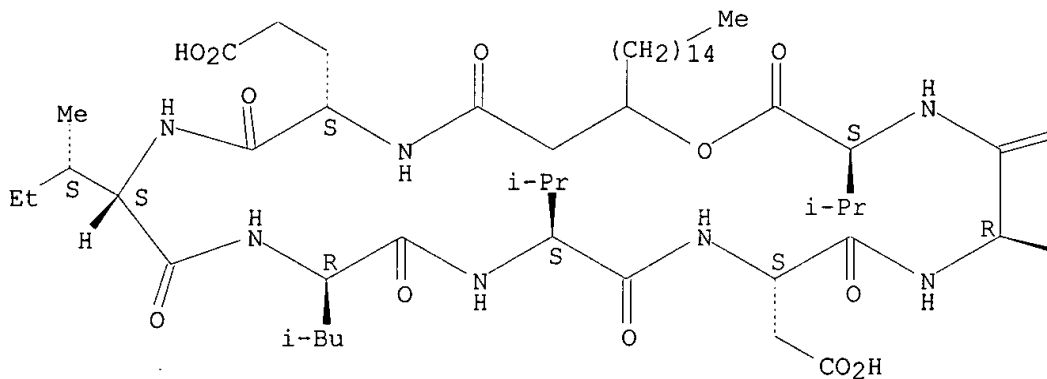
CRN 203726-09-4

CMF C55 H97 N7 O13

\*\*RELATED SEQUENCES AVAILABLE WITH SEQLINK\*\*

Absolute stereochemistry.

PAGE 1-A



PAGE 1-B

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Bu-i

CM 2

CRN 67-56-1  
CMF C H4 OH<sub>3</sub>C-OH1 REFERENCES IN FILE CA (1957 TO DATE)  
1 REFERENCES IN FILE CAPLUS (1957 TO DATE)

REFERENCE 1: 128:188618

L16 ANSWER 7 OF 33 REGISTRY COPYRIGHT 2003 ACS  
 RN **203741-96-2** REGISTRY  
 CN L-Leucine, N-(3-hydroxy-1-oxooctadecyl)-L-.alpha.-glutamyl-L-leucyl-D-leucyl-L-valyl-L-.alpha.-aspartyl-D-leucyl-, (7.fwdarw.1)-lactone, 1(or 5)-methyl ester (9CI) (CA INDEX NAME)  
 FS PROTEIN SEQUENCE; STEREOSEARCH  
 MF C57 H101 N7 O13  
 CI IDS  
 SR CA  
 LC STN Files: CA, CAPLUS, TOXCENTER, USPATFULL

\*\*RELATED SEQUENCES AVAILABLE WITH SEQLINK\*\*

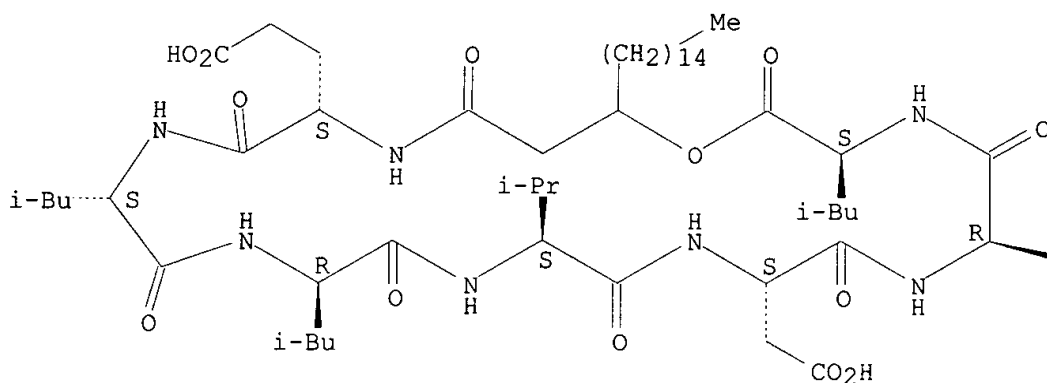
CM 1

CRN 203741-95-1  
CMF C56 H99 N7 O13

\*\*RELATED SEQUENCES AVAILABLE WITH SEQLINK\*\*

Absolute stereochemistry.

PAGE 1-A





PAGE 1-B

Bu-i

CM 2

CRN 67-56-1  
CMF C H4 OH<sub>3</sub>C-OH1 REFERENCES IN FILE CA (1957 TO DATE)  
1 REFERENCES IN FILE CAPLUS (1957 TO DATE)

REFERENCE 1: 128:188618

L16 ANSWER 8 OF 33 REGISTRY COPYRIGHT 2003 ACS  
RN 203741-94-0 REGISTRY  
CN L-Valine, N-(3-hydroxy-1-oxooctadecyl)-L-.alpha.-glutamyl-L-leucyl-D-leucyl-L-valyl-L-.alpha.-aspartyl-D-leucyl-, (7.fwdarw.1)-lactone, 1(or 5)-methyl ester (9CI) (CA INDEX NAME)  
FS PROTEIN SEQUENCE; STEREOSEARCH  
MF C56 H99 N7 O13  
CI IDS  
SR CA  
LC STN Files: CA, CAPLUS, TOXCENTER, USPATFULL

\*\*RELATED SEQUENCES AVAILABLE WITH SEQLINK\*\*

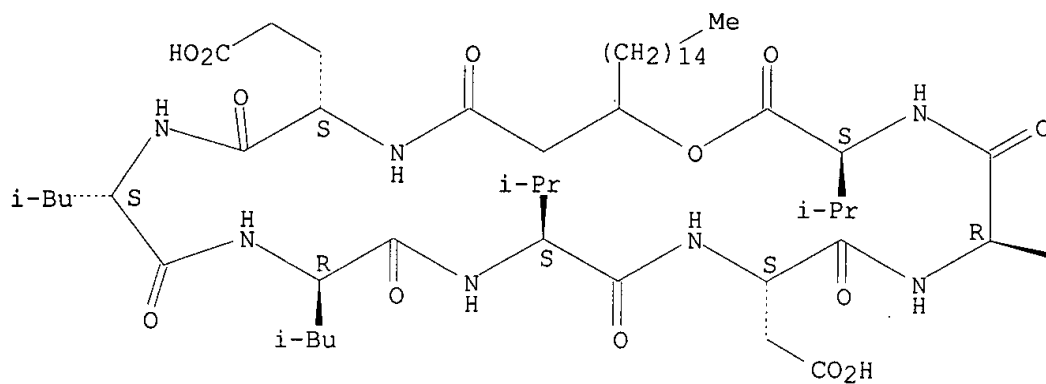
CM 1

CRN 203741-93-9  
CMF C55 H97 N7 O13

\*\*RELATED SEQUENCES AVAILABLE WITH SEQLINK\*\*

Absolute stereochemistry.

PAGE 1-A



PAGE 1-B

CM 2

CRN 67-56-1

CMF C H4 O

H<sub>3</sub>C-OH

1 REFERENCES IN FILE CA (1957 TO DATE)

1 REFERENCES IN FILE CAPLUS (1957 TO DATE)

REFERENCE 1: 128:188618

L16 ANSWER 9 OF 33 REGISTRY COPYRIGHT 2003 ACS

RN **203741-92-8** REGISTRY

CN L-Isoleucine, N-(3-hydroxy-1-oxoheptadecyl)-L-.alpha.-glutamyl-L-leucyl-D-leucyl-L-valyl-L-.alpha.-aspartyl-D-leucyl-, (7.fwdarw.1)-lactone, 1(or 5)-methyl ester (9CI) (CA INDEX NAME)

FS PROTEIN SEQUENCE; STEREOSEARCH

MF C56 H99 N7 O13

CI IDS

SR CA

LC STN Files: CA, CAPLUS, TOXCENTER, USPATFULL

\*\*RELATED SEQUENCES AVAILABLE WITH SEQLINK\*\*

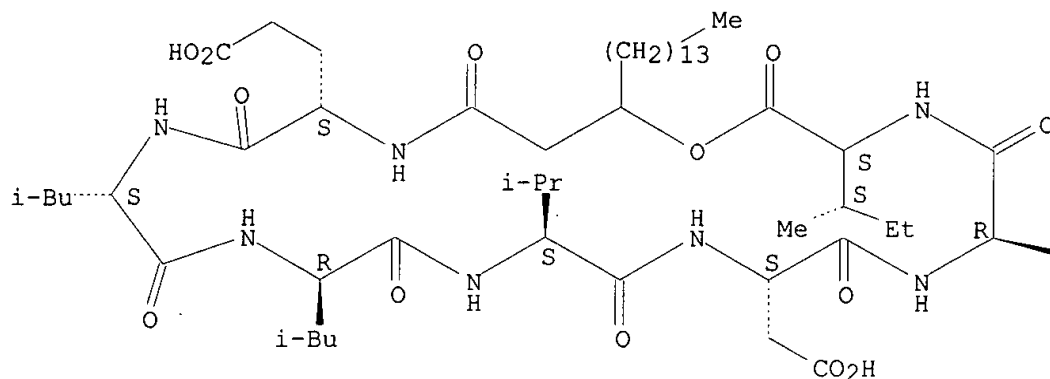
CM 1

CRN 203741-91-7  
CMF C55 H97 N7 O13

\*\*RELATED SEQUENCES AVAILABLE WITH SEQLINK\*\*

Absolute stereochemistry.

PAGE 1-A



PAGE 1-B

Bu-i

CM 2

CRN 67-56-1  
CMF C H4 O

H<sub>3</sub>C-OH

1 REFERENCES IN FILE CA (1957 TO DATE)  
1 REFERENCES IN FILE CAPLUS (1957 TO DATE)

REFERENCE 1: 128:188618

L16 ANSWER 10 OF 33 REGISTRY COPYRIGHT 2003 ACS

RN 203741-90-6 REGISTRY

CN L-Valine, N-(3-hydroxy-1-oxoheptadecyl)-L-.alpha.-glutamyl-L-isoleucyl-D-leucyl-L-valyl-L-.alpha.-aspartyl-L-leucyl-, (7.fwdarw.1)-lactone, 1(or 5)-methyl ester (9CI) (CA INDEX.NAME)

FS PROTEIN SEQUENCE; STEREOSEARCH

MF C55 H97 N7 O13

CI IDS  
SR CA  
LC STN Files: CA, CAPLUS, TOXCENTER, USPATFULL

\*\*RELATED SEQUENCES AVAILABLE WITH SEQLINK\*\*

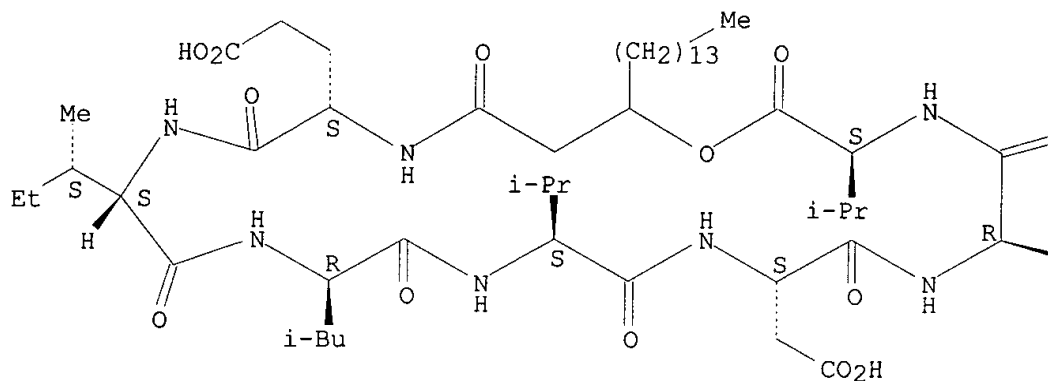
CM 1

CRN 203726-06-1  
CMF C54 H95 N7 O13

\*\*RELATED SEQUENCES AVAILABLE WITH SEQLINK\*\*

Absolute stereochemistry.

PAGE 1-A



PAGE 1-B

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Bu-i

CM 2

CRN 67-56-1  
CMF C H4 O

H<sub>3</sub>C-OH

1 REFERENCES IN FILE CA (1957 TO DATE)  
1 REFERENCES IN FILE CAPLUS (1957 TO DATE)

REFERENCE 1: 128:188618

L16 ANSWER 11 OF 33 REGISTRY COPYRIGHT 2003 ACS  
 RN 203741-89-3 REGISTRY  
 CN L-Leucine, N-(3-hydroxy-1-oxoheptadecyl)-L-.alpha.-glutamyl-L-leucyl-D-leucyl-L-valyl-L-.alpha.-aspartyl-D-leucyl-, (7.fwdarw.1)-lactone, 1(or 5)-methyl ester (9CI) (CA INDEX NAME)  
 FS PROTEIN SEQUENCE; STEREOSEARCH  
 MF C56 H99 N7 O13  
 CI IDS  
 SR CA  
 LC STN Files: CA, CAPLUS, TOXCENTER, USPATFULL

\*\*RELATED SEQUENCES AVAILABLE WITH SEQLINK\*\*

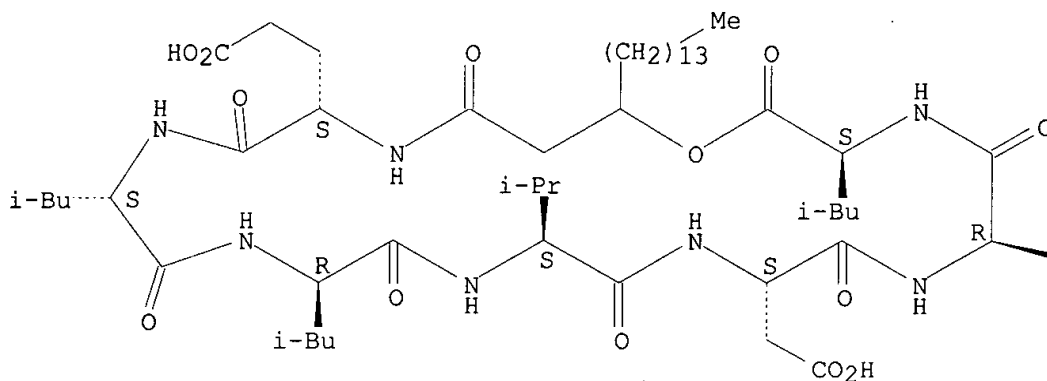
CM 1

CRN 203741-88-2  
 CMF C55 H97 N7 O13

\*\*RELATED SEQUENCES AVAILABLE WITH SEQLINK\*\*

Absolute stereochemistry.

PAGE 1-A



PAGE 1-B

Bu-i

CM 2

CRN 67-56-1  
 CMF C H4 O

H<sub>3</sub>C-OH

1 REFERENCES IN FILE CA (1957 TO DATE)  
 1 REFERENCES IN FILE CAPLUS (1957 TO DATE)

REFERENCE 1: 128:188618

L16 ANSWER 12 OF 33 REGISTRY COPYRIGHT 2003 ACS  
 RN **203741-87-1** REGISTRY  
 CN L-Valine, N-(3-hydroxy-1-oxoheptadecyl)-L-.alpha.-glutamyl-L-leucyl-D-leucyl-L-valyl-L-.alpha.-aspartyl-D-leucyl-, (7.fwdarw.1)-lactone, 1(or 5)-methyl ester (9CI) (CA INDEX NAME)  
 FS PROTEIN SEQUENCE; STEREOSEARCH  
 MF C55 H97 N7 O13  
 CI IDS  
 SR CA  
 LC STN Files: CA, CAPLUS, TOXCENTER, USPATFULL

\*\*RELATED SEQUENCES AVAILABLE WITH SEQLINK\*\*

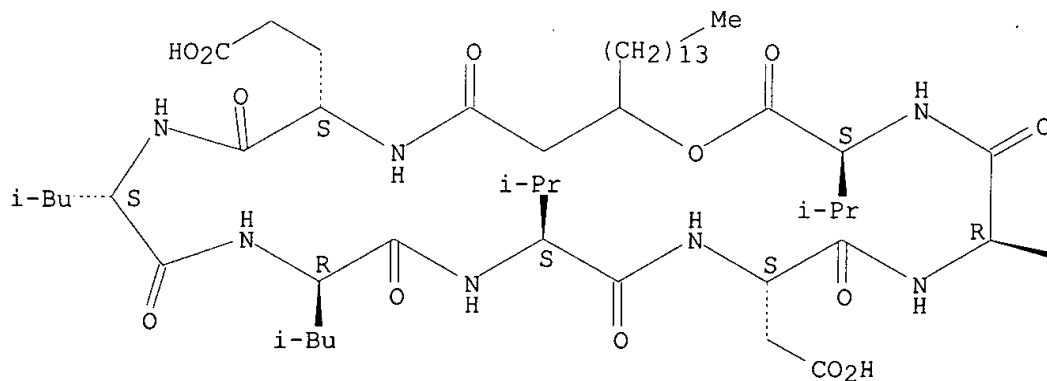
CM 1

CRN 203741-86-0  
 CMF C54 H95 N7 O13

\*\*RELATED SEQUENCES AVAILABLE WITH SEQLINK\*\*

Absolute stereochemistry.

PAGE 1-A



PAGE 1-B

Bu-i

CM 2

CRN 67-56-1  
CMF C H4 OH<sub>3</sub>C-OH1 REFERENCES IN FILE CA (1957 TO DATE)  
1 REFERENCES IN FILE CAPLUS (1957 TO DATE)

REFERENCE 1: 128:188618

L16 ANSWER 13 OF 33 REGISTRY COPYRIGHT 2003 ACS  
 RN 203741-85-9 REGISTRY  
 CN L-Isoleucine, N-(3-hydroxy-1-oxohexadecyl)-L-.alpha.-glutamyl-L-leucyl-D-leucyl-L-valyl-L-.alpha.-aspartyl-D-leucyl-, (7.fwdarw.1)-lactone, 1(or 5)-methyl ester (9CI) (CA INDEX NAME)  
 FS PROTEIN SEQUENCE; STEREOSEARCH  
 MF C55 H97 N7 O13  
 CI IDS  
 SR CA  
 LC STN Files: CA, CAPLUS, TOXCENTER, USPATFULL

\*\*RELATED SEQUENCES AVAILABLE WITH SEQLINK\*\*

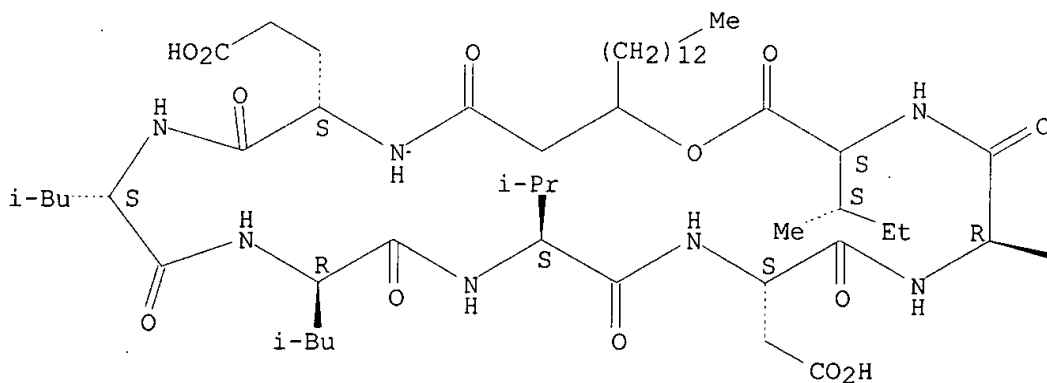
CM 1

CRN 203741-84-8  
CMF C54 H95 N7 O13

\*\*RELATED SEQUENCES AVAILABLE WITH SEQLINK\*\*

Absolute stereochemistry.

PAGE 1-A



Bu-i

CM 2

CRN 67-56-1

CMF C H4 O

H<sub>3</sub>C-OH

1 REFERENCES IN FILE CA (1957 TO DATE)

1 REFERENCES IN FILE CAPLUS (1957 TO DATE)

REFERENCE 1: 128:188618

L16 ANSWER 14 OF 33 REGISTRY COPYRIGHT 2003 ACS

RN 203741-83-7 REGISTRY

CN L-Valine, N-(3-hydroxy-1-oxoheptadecyl)-L-.alpha.-glutamyl-L-valyl-D-leucyl-L-valyl-L-.alpha.-aspartyl-D-leucyl-, (7.fwdarw.1)-lactone, 1(or 5)-methyl ester (9CI) (CA INDEX NAME)

FS PROTEIN SEQUENCE; STEREOSEARCH

MF C54 H95 N7 O13

CI IDS

SR CA

LC STN Files: CA, CAPLUS, TOXCENTER, USPATFULL

\*\*RELATED SEQUENCES AVAILABLE WITH SEQLINK\*\*

CM 1

CRN 203741-82-6

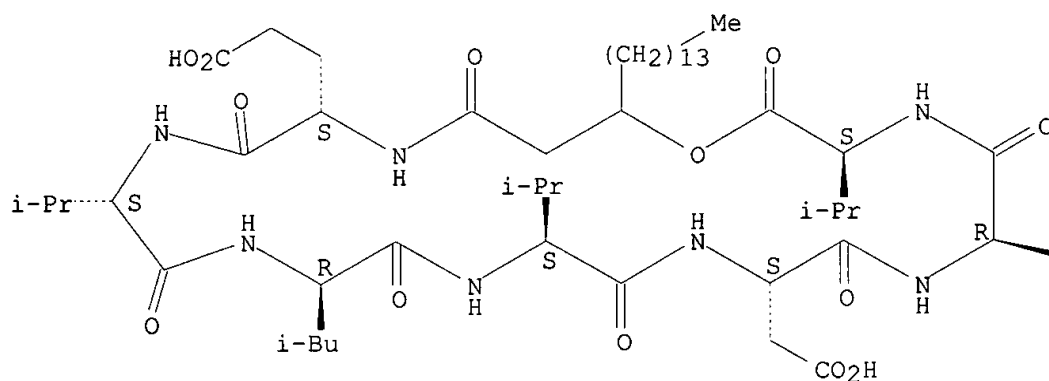
CMF C53 H93 N7 O13

\*\*RELATED SEQUENCES AVAILABLE WITH SEQLINK\*\*

Absolute stereochemistry.



PAGE 1-A



PAGE 1-B

CM 2

CRN 67-56-1  
CMF C H4 O

H<sub>3</sub>C-OH

1 REFERENCES IN FILE CA (1957 TO DATE)  
1 REFERENCES IN FILE CAPLUS (1957 TO DATE)

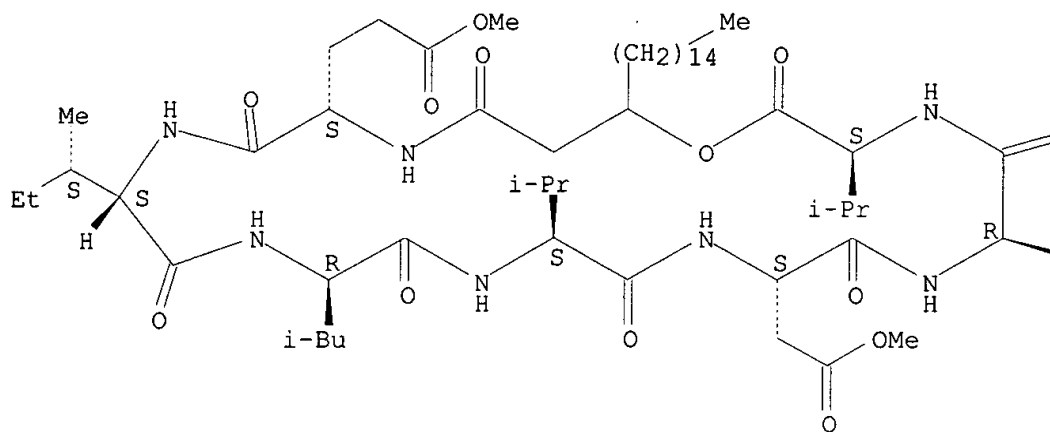
REFERENCE 1: 128:188618

L16 ANSWER 15 OF 33 REGISTRY COPYRIGHT 2003 ACS  
RN **203726-54-9** REGISTRY  
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FS PROTEIN SEQUENCE; STEREOSEARCH  
MF C57 H101 N7 O13  
SR CA  
LC STN Files: CA, CAPLUS, TOXCENTER, USPATFULL

\*\*RELATED SEQUENCES AVAILABLE WITH SEQLINK\*\*

Absolute stereochemistry.

PAGE 1-A



PAGE 1-B

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Bu-i

1 REFERENCES IN FILE CA (1957 TO DATE)  
 1 REFERENCES IN FILE CAPLUS (1957 TO DATE)

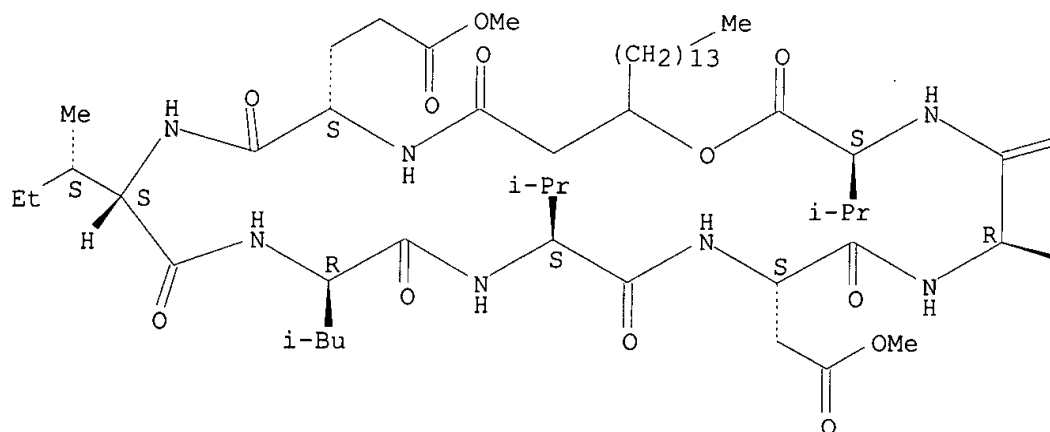
REFERENCE 1: 128:188618

L16 ANSWER 16 OF 33 REGISTRY COPYRIGHT 2003 ACS  
 RN 203726-51-6 REGISTRY  
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 FS PROTEIN SEQUENCE; STEREOSEARCH  
 MF C56 H99 N7 O13  
 SR CA  
 LC STN Files: CA, CAPLUS, TOXCENTER, USPATFULL

\*\*RELATED SEQUENCES AVAILABLE WITH SEQLINK\*\*

Absolute stereochemistry.

PAGE 1-A



PAGE 1-B

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Bu-i

1 REFERENCES IN FILE CA (1957 TO DATE)  
 1 REFERENCES IN FILE CAPLUS (1957 TO DATE)

REFERENCE 1: 128:188618

L16 ANSWER 17 OF 33 REGISTRY COPYRIGHT 2003 ACS

RN 203726-48-1 REGISTRY

CN L-Isoleucine, N-(3-hydroxy-1-oxooctadecyl)-L-.alpha.-glutamyl-L-isoleucyl-D-leucyl-L-valyl-L-.alpha.-aspartyl-D-leucyl-, (7.fwdarw.1)-lactone, 1,5-dimethyl ester (9CI) (CA INDEX NAME)

FS PROTEIN SEQUENCE; STEREOSEARCH

MF C58 H103 N7 O13

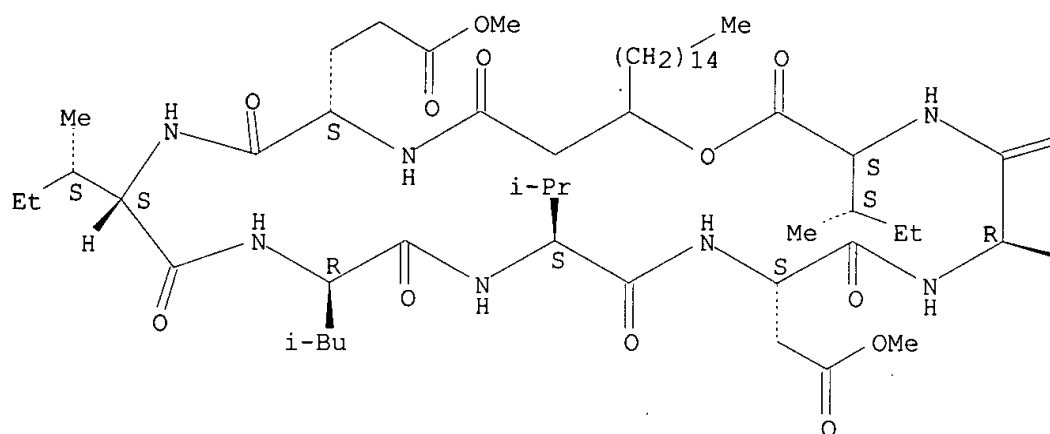
SR CA

LC STN Files: CA, CAPLUS, TOXCENTER, USPATFULL

\*\*RELATED SEQUENCES AVAILABLE WITH SEQLINK\*\*

Absolute stereochemistry.

PAGE 1-A



PAGE 1-B

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Bu-i

1 REFERENCES IN FILE CA (1957 TO DATE)  
 1 REFERENCES IN FILE CAPLUS (1957 TO DATE)

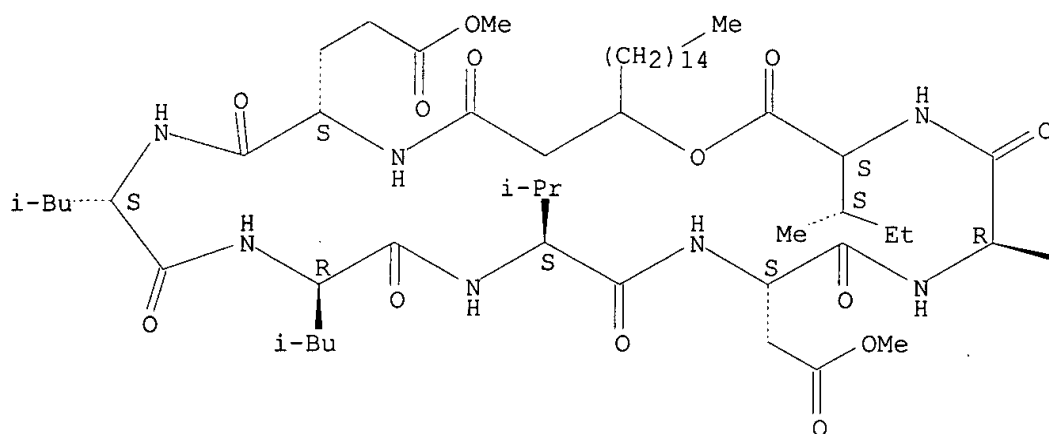
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L16 ANSWER 18 OF 33 REGISTRY COPYRIGHT 2003 ACS  
 RN **203726-45-8** REGISTRY  
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 FS PROTEIN SEQUENCE; STEREOSEARCH  
 MF C58 H103 N7 O13  
 SR CA  
 LC STN Files: CA, CAPLUS, TOXCENTER, USPATFULL

\*\*RELATED SEQUENCES AVAILABLE WITH SEQLINK\*\*

Absolute stereochemistry.

PAGE 1-A



PAGE 1-B

- 1 REFERENCES IN FILE CA (1957 TO DATE)  
 1 REFERENCES IN FILE CAPLUS (1957 TO DATE)

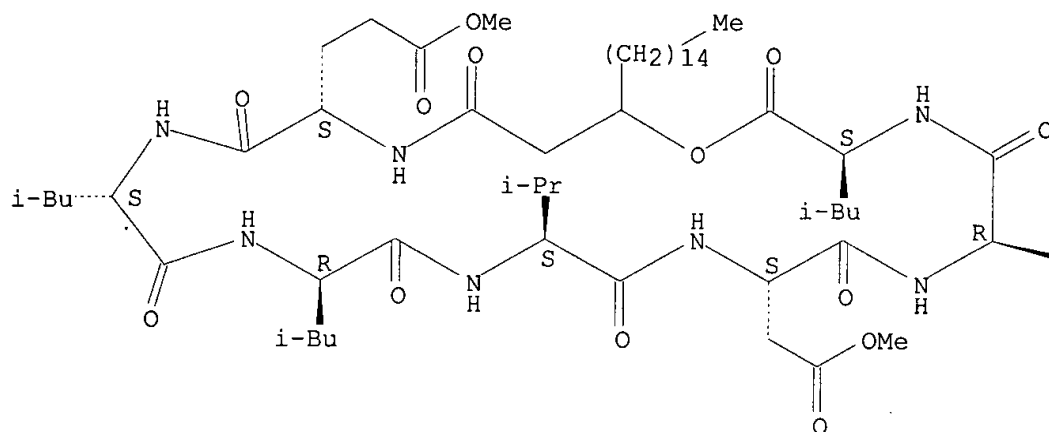
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L16 ANSWER 19 OF 33 REGISTRY COPYRIGHT 2003 ACS  
 RN 203726-41-4 REGISTRY  
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 FS PROTEIN SEQUENCE; STEREOSEARCH  
 MF C58 H103 N7 O13  
 SR CA  
 LC STN Files: CA, CAPLUS, TOXCENTER, USPATFULL

\*\*RELATED SEQUENCES AVAILABLE WITH SEQLINK\*\*

Absolute stereochemistry.

PAGE 1-A



PAGE 1-B

1 REFERENCES IN FILE CA (1957 TO DATE)  
 1 REFERENCES IN FILE CAPLUS (1957 TO DATE)

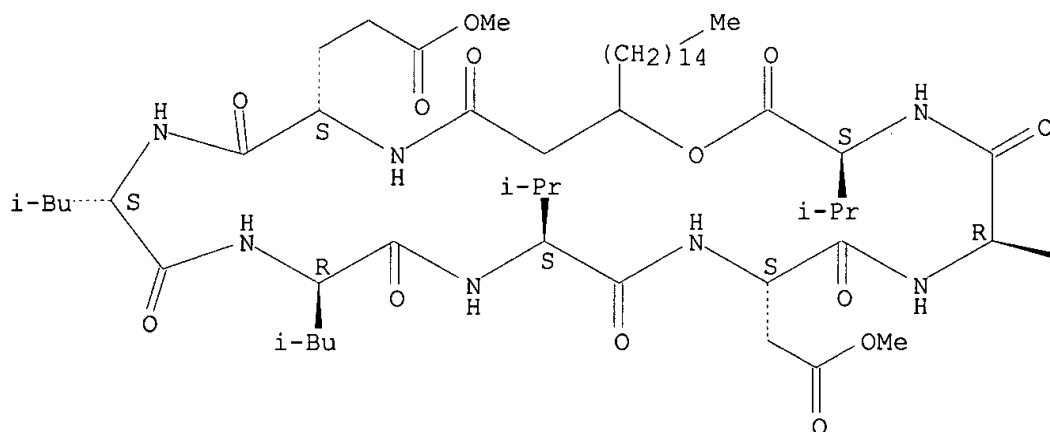
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L16 ANSWER 20 OF 33 REGISTRY COPYRIGHT 2003 ACS  
 RN **203726-37-8** REGISTRY  
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 FS PROTEIN SEQUENCE; STEREOSEARCH  
 MF C57 H101 N7 O13  
 SR CA  
 LC STN Files: CA, CAPLUS, TOXCENTER, USPATFULL

\*\*RELATED SEQUENCES AVAILABLE WITH SEQLINK\*\*

Absolute stereochemistry.

PAGE 1-A



PAGE 1-B

1 REFERENCES IN FILE CA (1957 TO DATE)  
 1 REFERENCES IN FILE CAPLUS (1957 TO DATE)

REFERENCE 1: 128:188618

L16 ANSWER 21 OF 33 REGISTRY COPYRIGHT 2003 ACS

RN 203726-35-6 REGISTRY

CN L-Isoleucine, N-(3-hydroxy-1-oxoheptadecyl)-L-.alpha.-glutamyl-L-leucyl-D-leucyl-L-valyl-L-.alpha.-aspartyl-D-leucyl-, (7.fwdarw.1)-lactone, 1,5-dimethyl ester (9CI) (CA INDEX NAME)

FS PROTEIN SEQUENCE; STEREOSEARCH

MF C57 H101 N7 O13

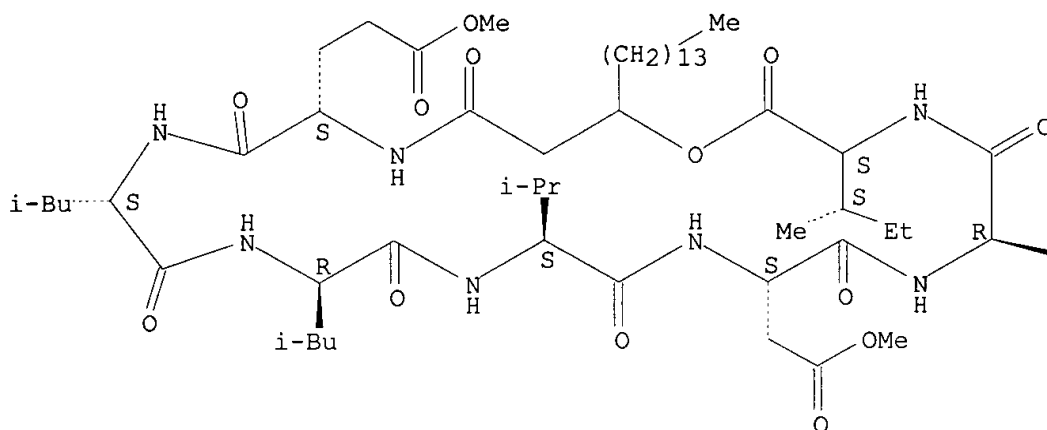
SR CA

LC STN Files: CA, CAPLUS, TOXCENTER, USPATFULL

\*\*RELATED SEQUENCES AVAILABLE WITH SEQLINK\*\*

Absolute stereochemistry.

PAGE 1-A



PAGE 1-B

1 REFERENCES IN FILE CA (1957 TO DATE)  
 1 REFERENCES IN FILE CAPLUS (1957 TO DATE)

REFERENCE 1: 128:188618

L16 ANSWER 22 OF 33 REGISTRY COPYRIGHT 2003 ACS

RN **203726-32-3** REGISTRY

CN L-Leucine, N-(3-hydroxy-1-oxoheptadecyl)-L-.alpha.-glutamyl-L-leucyl-D-leucyl-L-valyl-L-.alpha.-aspartyl-D-leucyl-, (7.fwdarw.1)-lactone, 1,5-dimethyl ester (9CI) (CA INDEX NAME)

FS PROTEIN SEQUENCE; STEREOSEARCH

MF C57 H101 N7 O13

SR CA

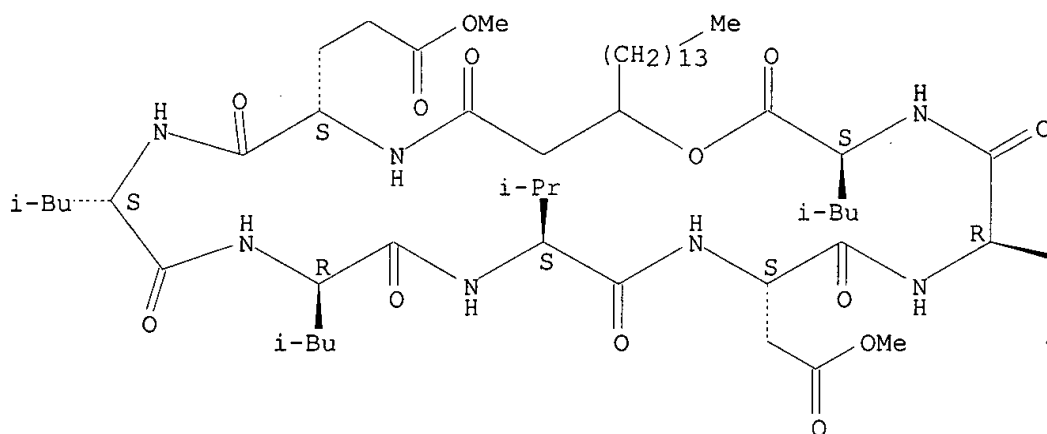
LC STN Files: CA, CAPLUS, TOXCENTER, USPATFULL

\*\*RELATED SEQUENCES AVAILABLE WITH SEQLINK\*\*

Absolute stereochemistry.



PAGE 1-A



PAGE 1-B

1 REFERENCES IN FILE CA (1957 TO DATE)  
 1 REFERENCES IN FILE CAPLUS (1957 TO DATE)

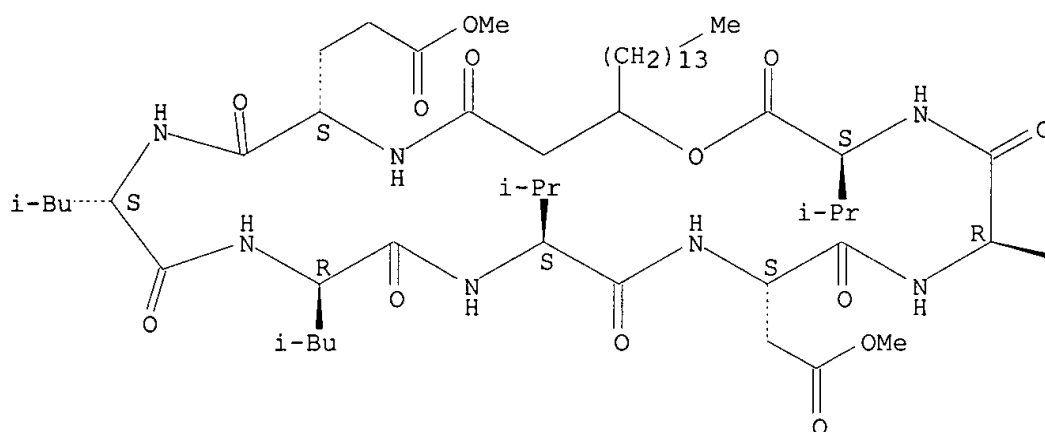
REFERENCE 1: 128:188618

L16 ANSWER 23 OF 33 REGISTRY COPYRIGHT 2003 ACS  
 RN 203726-29-8 REGISTRY  
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 FS PROTEIN SEQUENCE; STEREOSEARCH  
 MF C56 H99 N7 O13  
 SR CA  
 LC STN Files: CA, CAPLUS, TOXCENTER, USPATFULL

\*\*RELATED SEQUENCES AVAILABLE WITH SEQLINK\*\*

Absolute stereochemistry.

PAGE 1-A



PAGE 1-B

1 REFERENCES IN FILE CA (1957 TO DATE)  
 1 REFERENCES IN FILE CAPLUS (1957 TO DATE)

REFERENCE 1: 128:188618

L16 ANSWER 24 OF 33 REGISTRY COPYRIGHT 2003 ACS

RN **203726-26-5** REGISTRY

CN L-Valine, N-(3-hydroxy-1-oxoheptadecyl)-L-.alpha.-glutamyl-L-valyl-D-leucyl-L-valyl-L-.alpha.-aspartyl-D-leucyl-, (7.fwdarw.1)-lactone, 1,5-dimethyl ester (9CI) (CA INDEX NAME)

FS PROTEIN SEQUENCE; STEREOSEARCH

MF C55 H97 N7 O13

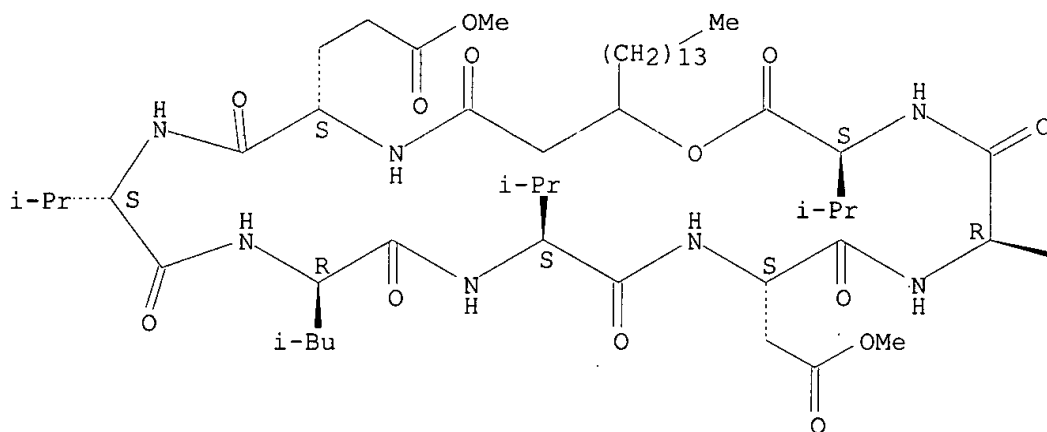
SR CA

LC STN Files: CA, CAPLUS, TOXCENTER, USPATFULL

**\*\*RELATED SEQUENCES AVAILABLE WITH SEQLINK\*\***

Absolute stereochemistry.

PAGE 1-A



PAGE 1-B

Bu-i

1 REFERENCES IN FILE CA (1957 TO DATE)  
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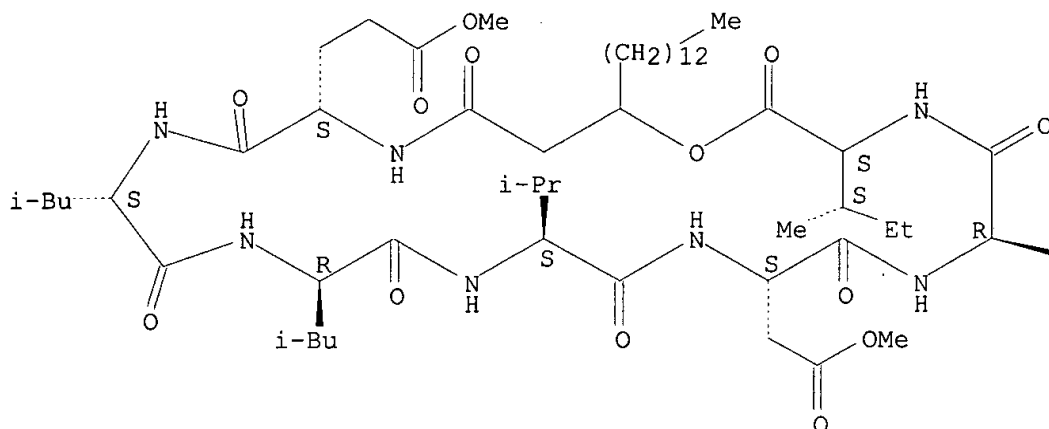
REFERENCE 1: 128:188618

L16 ANSWER 25 OF 33 REGISTRY COPYRIGHT 2003 ACS  
 RN 203726-23-2 REGISTRY  
 CN L-Isoleucine, N-(3-hydroxy-1-oxohexadecyl)-L-.alpha.-glutamyl-L-leucyl-D-leucyl-L-valyl-L-.alpha.-aspartyl-D-leucyl-, (7.fwdarw.1)-lactone, 1,5-dimethyl ester (9CI) (CA INDEX NAME)  
 FS PROTEIN SEQUENCE; STEREOSEARCH  
 MF C56 H99 N7 O13  
 SR CA  
 LC STN Files: CA, CAPLUS, TOXCENTER, USPATFULL

\*\*RELATED SEQUENCES AVAILABLE WITH SEQLINK\*\*

Absolute stereochemistry.

PAGE 1-A



PAGE 1-B

1 REFERENCES IN FILE CA (1957 TO DATE)  
 1 REFERENCES IN FILE CAPLUS (1957 TO DATE)

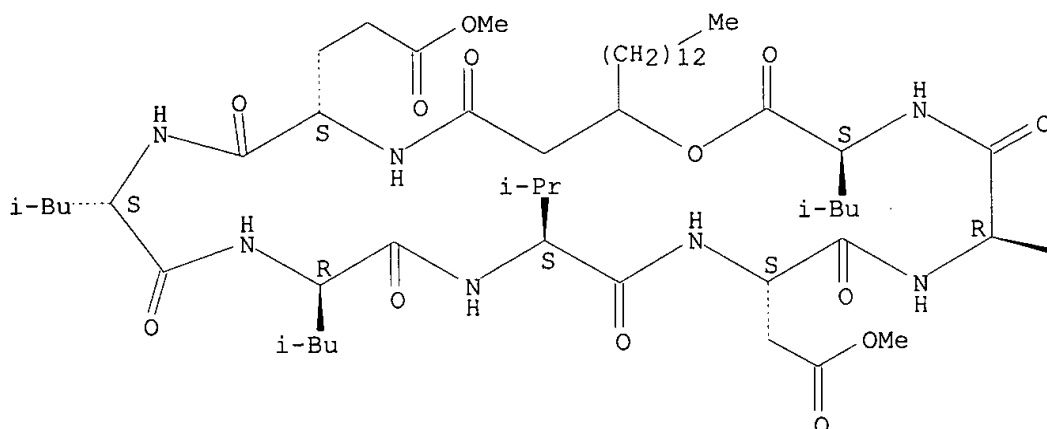
REFERENCE 1: 128:188618

L16 ANSWER 26 OF 33 REGISTRY COPYRIGHT 2003 ACS  
 RN **203726-20-9** REGISTRY  
 CN L-Leucine, N-(3-hydroxy-1-oxohexadecyl)-L-.alpha.-glutamyl-L-leucyl-D-leucyl-L-valyl-L-.alpha.-aspartyl-D-leucyl-, (7.fwdarw.1)-lactone, 1,5-dimethyl ester (9CI) (CA INDEX NAME)  
 FS PROTEIN SEQUENCE; STEREOSEARCH  
 MF C56 H99 N7 O13  
 SR CA  
 LC STN Files: CA, CAPLUS, TOXCENTER, USPATFULL

\*\*RELATED SEQUENCES AVAILABLE WITH SEQLINK\*\*

Absolute stereochemistry.

PAGE 1-A



PAGE 1-B

1 REFERENCES IN FILE CA (1957 TO DATE)  
 1 REFERENCES IN FILE CAPLUS (1957 TO DATE)

REFERENCE 1: 128:188618

L16 ANSWER 27 OF 33 REGISTRY COPYRIGHT 2003 ACS

RN 203726-17-4 REGISTRY

CN L-Valine, N-(3-hydroxy-1-oxohexadecyl)-L-.alpha.-glutamyl-L-leucyl-D-leucyl-L-valyl-L-.alpha.-aspartyl-D-leucyl-, (7.fwdarw.1)-lactone, 1,5-dimethyl ester (9CI) (CA INDEX NAME)

FS PROTEIN SEQUENCE; STEREOSEARCH

MF C55 H97 N7 O13

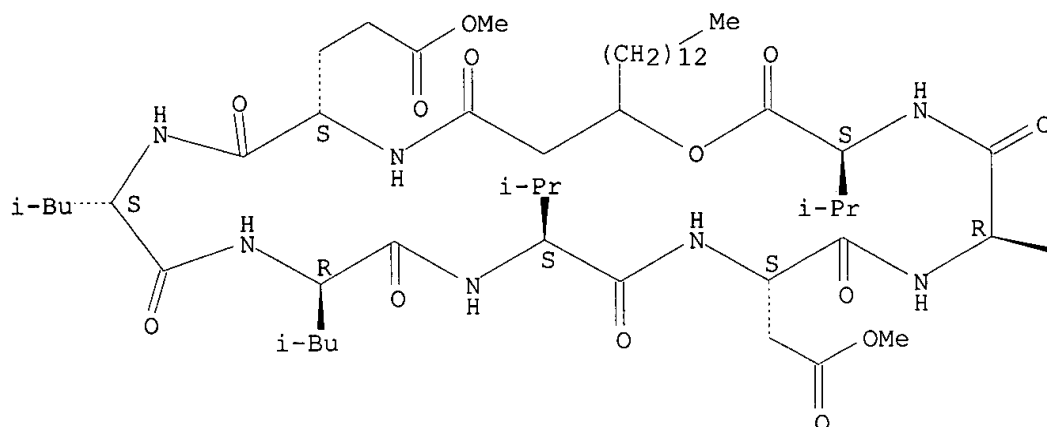
SR CA

LC STN Files: CA, CAPLUS, TOXCENTER, USPATFULL

\*\*RELATED SEQUENCES AVAILABLE WITH SEQLINK\*\*

Absolute stereochemistry.

PAGE 1-A



PAGE 1-B

Bu-i

1 REFERENCES IN FILE CA (1957 TO DATE)  
 1 REFERENCES IN FILE CAPLUS (1957 TO DATE)

REFERENCE 1: 128:188618

L16 ANSWER 28 OF 33 REGISTRY- COPYRIGHT 2003 ACS

RN 203726-12-9 REGISTRY

CN L-Isoleucine, N-(3-hydroxy-1-oxooctadecyl)-L-.alpha.-glutamyl-L-isoleucyl-D-leucyl-L-valyl-L-.alpha.-aspartyl-D-leucyl-, (7.fwdarw.1)-lactone (9CI)  
 (CA INDEX NAME)

FS PROTEIN SEQUENCE; STEREOSEARCH

MF C56 H99 N7 O13

CI COM

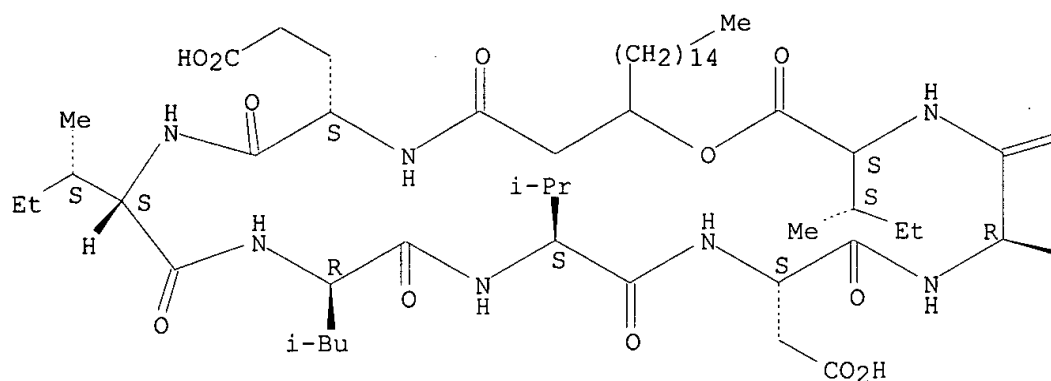
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LC STN Files: CA, CAPLUS, TOXCENTER, USPATFULL

\*\*RELATED SEQUENCES AVAILABLE WITH SEQLINK\*\*

Absolute stereochemistry.

PAGE 1-A



PAGE 1-B

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Bu-i

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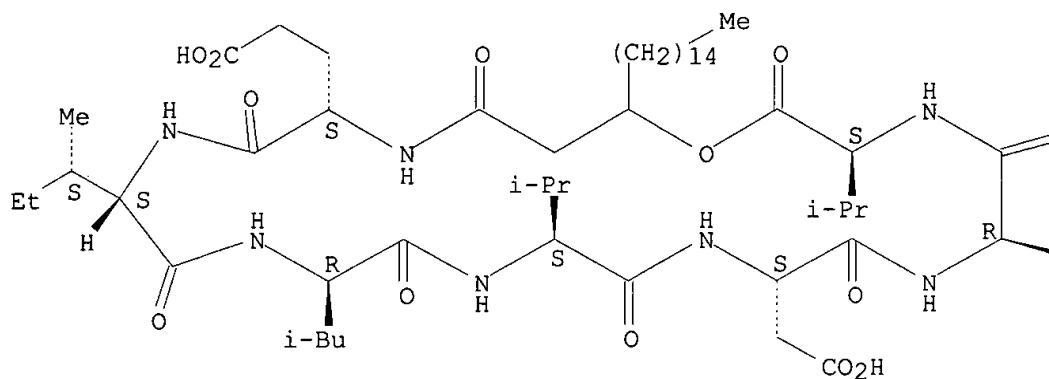
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L16 ANSWER 29 OF 33 REGISTRY COPYRIGHT 2003 ACS  
 RN 203726-09-4 REGISTRY  
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 (CA INDEX NAME)  
 FS PROTEIN SEQUENCE; STEREOSEARCH  
 MF C55 H97 N7 O13  
 CI COM  
 SR CA  
 LC STN Files: CA, CAPLUS, TOXCENTER, USPATFULL

\*\*RELATED SEQUENCES AVAILABLE WITH SEQLINK\*\*

Absolute stereochemistry.

PAGE 1-A



PAGE 1-B

=O

Bu-i

1 REFERENCES IN FILE CA (1957 TO DATE)  
 1 REFERENCES IN FILE CAPLUS (1957 TO DATE)

REFERENCE 1: 128:188618

L16 ANSWER 30 OF 33 REGISTRY COPYRIGHT 2003 ACS

RN **203726-06-1** REGISTRY

CN L-Valine, N-(3-hydroxy-1-oxoheptadecyl)-L-.alpha.-glutamyl-L-isoleucyl-D-leucyl-L-valyl-L-.alpha.-aspartyl-D-leucyl-, (7.fwdarw.1)-lactone (9CI)  
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FS PROTEIN SEQUENCE; STEREOSEARCH

MF C54 H95 N7 O13

CI COM

SR CA

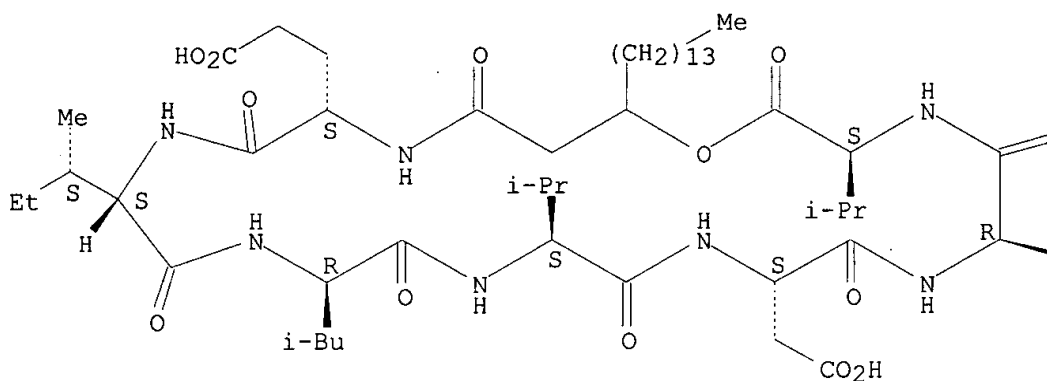
LC STN Files: CA, CAPLUS, TOXCENTER, USPATFULL

\*\*RELATED SEQUENCES AVAILABLE WITH SEQLINK\*\*

Absolute stereochemistry.



PAGE 1-A



PAGE 1-B

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Bu-i

1 REFERENCES IN FILE CA (1957 TO DATE)  
 1 REFERENCES IN FILE CAPLUS (1957 TO DATE)

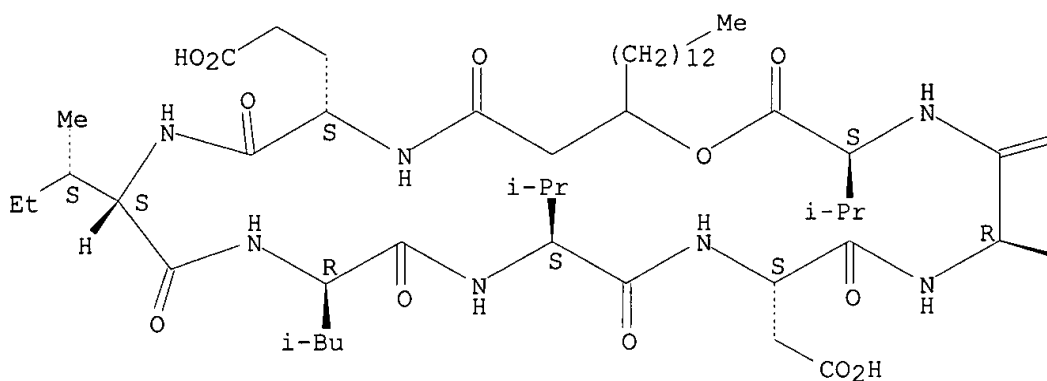
REFERENCE 1: 128:188618

L16 ANSWER 31 OF 33 REGISTRY COPYRIGHT 2003 ACS  
 RN 203726-04-9 REGISTRY  
 CN L-Valine, N-(3-hydroxy-1-oxohexadecyl)-L-.alpha.-glutamyl-L-isoleucyl-D-leucyl-L-valyl-L-.alpha.-aspartyl-D-leucyl-, (7.fwdarw.1)-lactone (9CI)  
 (CA INDEX NAME)  
 FS PROTEIN SEQUENCE; STEREOSEARCH  
 MF C53 H93 N7 O13  
 CI COM  
 SR CA  
 LC STN Files: CA, CAPLUS, TOXCENTER, USPATFULL

\*\*RELATED SEQUENCES AVAILABLE WITH SEQLINK\*\*

Absolute stereochemistry.

PAGE 1-A



PAGE 1-B

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Bu-i

1 REFERENCES IN FILE CA (1957 TO DATE)  
 1 REFERENCES IN FILE CAPLUS (1957 TO DATE)

REFERENCE 1: 128:188618

L16 ANSWER 32 OF 33 REGISTRY COPYRIGHT 2003 ACS

RN 136109-78-9 REGISTRY

CN Surfactin, 3-L-isoleucine- (9CI) (CA INDEX NAME)

OTHER CA INDEX NAMES:

CN 1-Oxa-4,7,10,13,16,19,22-heptaazacyclopentacosane, cyclic peptide deriv.

CN Surfactin, 7-L-isoleucine-

OTHER NAMES:

CN Surfactin A

FS PROTEIN SEQUENCE

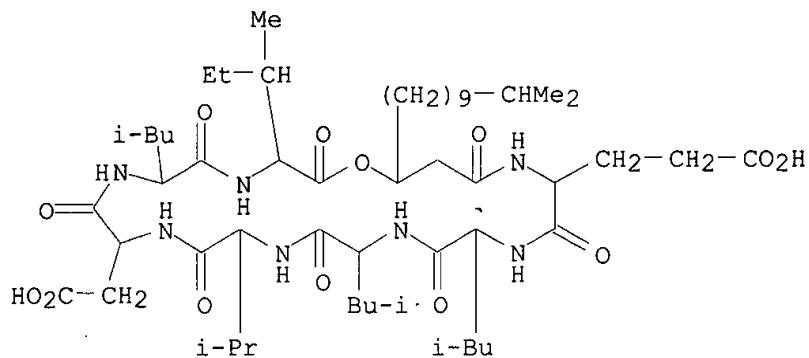
DR 139389-36-9

MF C53 H93 N7 O13

SR CA

LC STN Files: BIOSIS, CA, CAPLUS, CASREACT

\*\*RELATED SEQUENCES AVAILABLE WITH SEQLINK\*\*



5 REFERENCES IN FILE CA (1957 TO DATE)

5 REFERENCES IN FILE CAPLUS (1957 TO DATE)

REFERENCE 1: 135:118640

REFERENCE 2: 135:58026

REFERENCE 3: 121:102344

REFERENCE 4: 119:221057

REFERENCE 5: 115:130233

L16 ANSWER 33 OF 33 REGISTRY COPYRIGHT 2003 ACS

RN 24730-31-2 REGISTRY

CN Surfactin C1 (9CI) (CA INDEX NAME)

OTHER CA INDEX NAMES:

CN 1-Oxa-4,7,10,13,16,19,22-heptaazacyclopentacosane, cyclic peptide deriv.

CN Leucine, N-[N-[N-[N-[N-[N-(3-hydroxy-13-methyltetradecanoyl)-L-.alpha.-glutamyl]-L-leucyl]-D-leucyl]-L-valyl]-L-.alpha.-aspartyl]-D-leucyl]-, .psi.-lactone, L- (8CI)

OTHER NAMES:

CN Cyclo(L-.alpha.-aspartyl-D-leucyl-L-leucyl-3-hydroxy-13-methyltetradecanoyl-L-.alpha.-glutamyl-L-leucyl-D-leucyl-L-valyl)

CN Surfactin

FS PROTEIN SEQUENCE; STEREOSEARCH

DR 86747-40-2, 325726-31-6

MF C53 H93 N7 O13

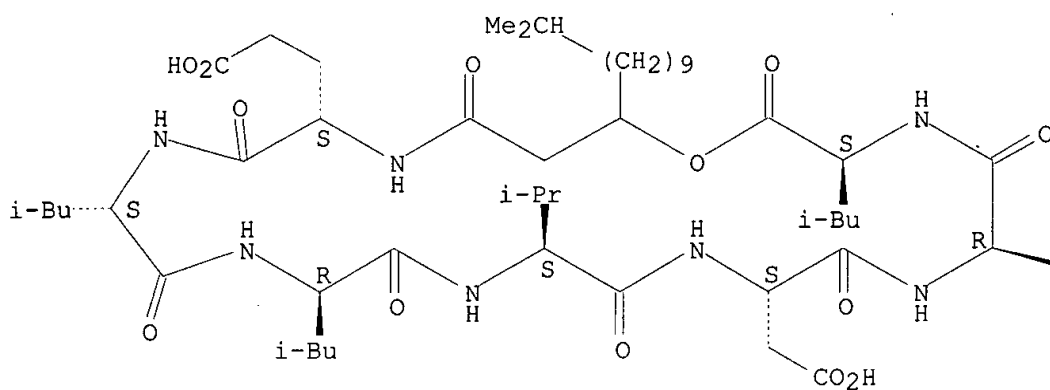
LC STN Files: AGRICOLA, BIOBUSINESS, BIOSIS, BIOTECHNO, CA, CANCERLIT, CAPLUS, CHEMCATS, CIN, CSCHEM, DDFU, DRUGU, EMBASE, IFICDB, IFIPAT, IFIUDB, IPA, MEDLINE, MSDS-OHS, NAPRALERT, PROMT, TOXCENTER, USPATFULL

\*\*RELATED SEQUENCES AVAILABLE WITH SEQLINK\*\*

Absolute stereochemistry.

Currently available stereo shown.

PAGE 1-A



PAGE 1-B

184 REFERENCES IN FILE CA (1957 TO DATE)

8 REFERENCES TO NON-SPECIFIC DERIVATIVES IN FILE CA

185 REFERENCES IN FILE CAPLUS (1957 TO DATE)

REFERENCE 1: 138:117265

REFERENCE 2: 138:61092

REFERENCE 3: 138:21273

REFERENCE 4: 137:324251

REFERENCE 5: 137:195035

REFERENCE 6: 137:108320

REFERENCE 7: 137:46156

REFERENCE 8: 137:29780

REFERENCE 9: 136:330564

REFERENCE 10: 136:330527

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FILE COVERS 1907 - 28 Apr 2003 VOL 138 ISS 18  
 FILE LAST UPDATED: 27 Apr 2003 (20030427/ED)

This file contains CAS Registry Numbers for easy and accurate substance identification.

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L14          209 SEA FILE=HCAPLUS ABB=ON  PLU=ON  L13
L15          7  SEA FILE=HCAPLUS ABB=ON  PLU=ON  L14 AND (?VIRAL? OR ?VIRUS?
          OR ?VIRIS?)
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          203726-12-9/BI OR 203726-17-4/BI OR 203726-20-9/BI OR 203726-23
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L17          958 SEA FILE=REGISTRY ABB=ON  PLU=ON  E[LIV]L[VA]DL/SQSP
L18          201 SEA FILE=REGISTRY ABB=ON  PLU=ON  L17 AND SQL<=10
L19          13 SEA FILE=REGISTRY ABB=ON  PLU=ON  L18 AND CYCL?/NTE
L20          12 SEA FILE=REGISTRY ABB=ON  PLU=ON  L19 NOT L16
L21          3 SEA FILE=REGISTRY ABB=ON  PLU=ON  L20 NOT L13
L22          4 SEA FILE=HCAPLUS ABB=ON  PLU=ON  L21
L23          4 SEA FILE=HCAPLUS ABB=ON  PLU=ON  L22 NOT L15

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=> d ibib abs hitrn 123 1-4

L23 ANSWER 1 OF 4 HCAPLUS COPYRIGHT 2003 ACS  
 ACCESSION NUMBER: 2002:787034 HCAPLUS  
 DOCUMENT NUMBER: 138:21273  
 TITLE: Characterization of the Surfactin Synthetase  
 C-Terminal Thioesterase Domain as a Cyclic

AUTHOR(S): Depsipeptide Synthase  
Tseng, Claire C.; Bruner, Steven D.; Kohli, Rahul M.;  
Marahiel, Mohamed A.; Walsh, Christopher T.; Sieber,  
Stephan A.  
CORPORATE SOURCE: Department of Biological Chemistry and Molecular  
Pharmacology, Harvard Medical School, Boston, MA,  
02115, USA  
SOURCE: Biochemistry (2002), 41(45), 13350-13359  
CODEN: BICHAW; ISSN: 0006-2960  
PUBLISHER: American Chemical Society  
DOCUMENT TYPE: Journal  
LANGUAGE: English

AB The C-terminal thioesterase domain of the nonribosomal peptide synthetase producing the lipopeptide surfactin (Srf TE) retains autonomous ability to generate the cyclic peptidolactone skeleton of surfactin when provided with a sol. .beta.-hydroxy-butyl-yl-heptapeptidyl thioester substrate. Utilizing the recently solved crystal structure [Bruner, S. D., et al. (2002) Structure 10, 301-310], the active-site nucleophile, Ser80, was changed to Cys, and the other members of the catalytic triad, Asp107 and His207, were changed to Ala, with the resulting mutants lacking detectable activity. Two cationic side chains in the active site, Lys111 and Arg120, were changed to Ala, causing an increased partitioning of the product to hydrolysis, as did a P26G mutant, mimicking the behavior of lipases. To evaluate recognition elements in substrates used by Srf TE, alterations to the fatty acyl group, the heptapeptide, and the thioester leaving group were made, and the resulting substrates were characterized for kinetic competency and flux of product to cyclization or hydrolysis. Alterations that could be accepted for cyclization were identified in all three parts of the substrate, although tolerance limits for changes varied. In addn., cocrystal structures of Srf TE with dipeptidyl boronate inhibitors were solved, illustrating the crit. binding determinants of the substrate. On the basis of the structures and biochem. data, the cyclizing conformation of the surfactin peptide was modeled into the enzyme active site.

IT 478165-47-8

RL: BSU (Biological study, unclassified); PRP (Properties); BIOL  
(Biological study)

(characterization of surfactin synthetase C-terminal thioesterase  
domain as cyclic depsipeptide synthase)

REFERENCE COUNT: 25 THERE ARE 25 CITED REFERENCES AVAILABLE FOR THIS  
RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L23 ANSWER 2 OF 4 HCAPLUS COPYRIGHT 2003 ACS

ACCESSION NUMBER: 2000:694303 HCAPLUS

DOCUMENT NUMBER: 133:283304

TITLE: EB-162 substance for biosurfactant and its  
manufacturing method

INVENTOR(S): Negishi, Yoshinori; Matsuo, Norishige; Miyadera,  
Keisuke; Tanishima, Masae; Esumi, Yasuaki

PATENT ASSIGNEE(S): Ministry of International Trade and Industry Basic  
Industries Bureau, Japan

SOURCE: Jpn. Kokai Tokkyo Koho, 7 pp.

CODEN: JKXXAF

DOCUMENT TYPE: Patent

LANGUAGE: Japanese

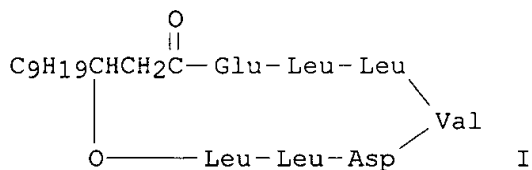
FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 2000273100	A2	20001003	JP 1999-115313	19990319
JP 3103883	B2	20001030		

PRIORITY APPLN. INFO.: JP 1999-115313 19990319

GI



AB The EB-162 substance which is useful as a biosurfactant is represented by I or its salt. I is derived by cultivation of *Bacillus subtilis* EB162 and extn. therefrom.

IT **299416-25-4P**

RL: BAC (Biological activity or effector, except adverse); BPN (Biosynthetic preparation); BSU (Biological study, unclassified); BUU (Biological use, unclassified); TEM (Technical or engineered material use); BIOL (Biological study); PREP (Preparation); USES (Uses)  
(EB-162 biosurfactant from *Bacillus subtilis* and its manufg. method)

L23 ANSWER 3 OF 4 HCAPLUS COPYRIGHT 2003 ACS

ACCESSION NUMBER: 1999:233239 HCAPLUS

DOCUMENT NUMBER: 131:40793

TITLE: The membranotropic activity of cyclic acyldepsipeptides from bacterium *Bacillus pumilus*, associated with the marine sponge *Ircinia* sp.

AUTHOR(S): Prokof'eva, Nina G.; Kalinovskaya, Natalia I.; Luk'yanov, Pavel A.; Shentsova, Elena B.; Kuznetsova, Tatiana A.

CORPORATE SOURCE: Pacific Institute of Bioorganic Chemistry of Far Eastern Branch of the Russian Academy of Sciences, Vladivostoku, 159, Russia

SOURCE: Toxicon (1999), 37(5), 801-813

CODEN: TOXIA6; ISSN: 0041-0101

PUBLISHER: Elsevier Science Ltd.

DOCUMENT TYPE: Journal

LANGUAGE: English

AB The isolate of *Bacillus pumilus* assocd. with the marine sponge *Ircinia* sp. produced the surfactin-like lipopeptides, cyclic acyldepsipeptides. The hemolytic activity of individual cyclic acyldepsipeptides, bacircines (BI) 2, 3, 4, 5 and 5A having different acyl side chain structures (anteiso-C13, iso-C14, normal-C14, anteiso-C15, and iso-C15, resp.) was studied. The hemolytic power of bacircines depended on both the structure of the side chain (n- > iso- > anteiso-) and pH values (5.6 and 6.5 > 7.4). Hemolytic potency as a function of BI 5 concn. was given for pH 6.5; 7.4; 8.0; 9.0. PH dependent hemolysis induced by BI 5 was shown to be reversible. The membrane damaging potential of bacircine 5 (5 .mu.M) at pH 6.5 was characterized by a higher rate of hemolysis and by a shorter time between the introduction of BI 5 soln. into the RBC samples and the onset of hemolysis. Under this condition, BI 5 decreased abnormally the microviscosity of erythrocyte ghosts bilayer. The damaging potency of BI 5 decreased with an increase pH from 6.5 to 7.4 or its decrease from 6.5 to 4.9. It was shown that fatty acid bacircine fragment penetrated into the lipid bilayer to a depth of min. 7 carbon atoms. Consts. of disocn. of the Asp (pK 4.75) and Glu (pK 6.65) residues of bacircine in the lipid bilayer were obtained. These results showed that at pH 6.5 BI 5 possessed membranotropic activity in the monoionic form.

IT **169276-09-9**, Bacircine 2

RL: ADV (Adverse effect, including toxicity); BIOL (Biological study)  
(membranotropic activity of cyclic acyldepsipeptides from bacterium)

Bacillus pumilus, assocd. with marine sponge Ircinia sp.)  
 REFERENCE COUNT: 30 THERE ARE 30 CITED REFERENCES AVAILABLE FOR THIS  
 RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L23 ANSWER 4 OF 4 HCAPLUS COPYRIGHT 2003 ACS  
 ACCESSION NUMBER: 1995:836763 HCAPLUS  
 DOCUMENT NUMBER: 123:280410  
 TITLE: Surfactin-like structures of five cyclic depsipeptides  
 from the marine isolate of Bacillus pumilus  
 AUTHOR(S): Kalinovskaya, N. I.; Kuznetsova, T. A.; Rashkes, Ya.  
 V.; Mil'grom, Yu. M.; Mil'grom, E. G.; Willis, R. H.;  
 Wood, A. I.; Kurtz, H. A.; Carabedian, C.; et al.  
 CORPORATE SOURCE: Pacific Inst. Bioorg. Chem. Far-Eastern Branch,  
 Russian Acad. Sci., Vladivostok, 690022, Russia  
 SOURCE: Izvestiya Akademii Nauk, Seriya Khimicheskaya (1995),  
 (5), 979-83  
 CODEN: IASKEA  
 PUBLISHER: Nauka  
 DOCUMENT TYPE: Journal  
 LANGUAGE: Russian

AB Five cyclic depsipeptides, termed bacirtsins 1-5, with mol. masses of  
 1007, 1021, 1021, 1035, 1035 were obtained from Bacillus pumilus KMM 150,  
 assocd. with australian marine sponge Ircinia sp. Their structures were  
 assigned by mass spectrometric techniques, chem. modification, and on the  
 basis of extensive spectroscopic anal. including several types of  
 two-dimensional NMR.

IT 169276-09-9, Batsirtsin 1

RL: PRP (Properties)

(surfactin-like structures of five cyclic depsipeptides from marine  
 isolate of Bacillus pumilus)

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 DICTIONARY FILE UPDATES: 27 APR 2003 HIGHEST RN 506405-59-0

TSCA INFORMATION NOW CURRENT THROUGH JANUARY 6, 2003

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 conducting SmartSELECT searches.

Crossover limits have been increased. See HELP CROSSOVER for details.

Experimental and calculated property data are now available. See HELP  
 PROPERTIES for more information. See STNote 27, Searching Properties  
 in the CAS Registry File, for complete details:  
<http://www.cas.org/ONLINE/STN/STNOTES/stnotes27.pdf>

=>  
 =>

=> d .seq 121 1-3



L21 ANSWER 1 OF 3 REGISTRY COPYRIGHT 2003 ACS  
 RN 478165-47-8 REGISTRY  
 CN Cyclo[3-amino-L-alanyl-(3R)-3-hydroxybutanoyl-L-.alpha.-glutamyl-L-leucyl-D-leucyl-L-valyl-L-.alpha.-aspartyl-D-leucyl] (9CI) (CA INDEX NAME)  
 NTE **cyclic**  
 modified (modifications unspecified)

type	location			description
uncommon	Dpr-3	-	-	
uncommon	Und-4	-	-	
stereo	Leu-2	-	D	
stereo	Leu-7	-	D	

SQL 8  
 SQL 8  
 NTE **cyclic**  
 modified (modifications unspecified)

SEQ 1 DLXXELLV

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HITS AT: 1-2, 5-8

REFERENCE 1: 138:21273

L21 ANSWER 2 OF 3 REGISTRY COPYRIGHT 2003 ACS  
 RN 299416-25-4 REGISTRY  
 CN Cyclo(L-.alpha.-aspartyl-L-leucyl-L-leucyl-3-hydroxydodecanoyl-L-.alpha.-glutamyl-L-leucyl-L-leucyl-L-valyl) (9CI) (CA INDEX NAME)  
 NTE **cyclic**  
 modified (modifications unspecified)

type	location			description
uncommon	Und-4	-	-	

SQL 8  
 SQL 8  
 NTE **cyclic**  
 modified (modifications unspecified)

SEQ 1 DLLXELLV

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HITS AT: 1-2, 5-8

\*\*RELATED SEQUENCES AVAILABLE WITH SEQLINK\*\*

REFERENCE 1: 133:283304

L21 ANSWER 3 OF 3 REGISTRY COPYRIGHT 2003 ACS  
 RN 169276-09-9 REGISTRY  
 CN Batsirtsin 1 (9CI) (CA INDEX NAME)  
 OTHER NAMES:  
 CN Bacircine 2  
 CN Leucine, N-[N-[N-[N-[N-[N-(3-hydroxy-10-methyl-1-oxododecyl)-.alpha.-glutamyl]leucyl]leucyl]valyl]-.alpha.-aspartyl]leucyl]-, .psi.-lactone  
 NTE **cyclic**  
 modified (modifications unspecified)

type	location			description
uncommon	Bal-4	-	-	

replacement Bal-4 - oxa

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SQL 8

SQL 8

NTE **cyclic**

modified (modifications unspecified)

SEQ 1 DLLXELLV

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HITS AT: 1-2, 5-8

\*\*RELATED SEQUENCES AVAILABLE WITH SEQLINK\*\*

REFERENCE 1: 131:40793

REFERENCE 2: 123:280410

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FILE COVERS 1907 - 28 Apr 2003 VOL 138 ISS 18

FILE LAST UPDATED: 27 Apr 2003 (20030427/ED)

This file contains CAS Registry Numbers for easy and accurate substance identification.

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L12          STR
L13          117 SEA FILE=REGISTRY SSS FUL L12
L14          209 SEA FILE=HCAPLUS ABB=ON  PLU=ON  L13
L15          7  SEA FILE=HCAPLUS ABB=ON  PLU=ON  L14 AND (?VIRAL? OR ?VIRUS?
              OR ?VIRIS?)
L16          33 SEA FILE=REGISTRY ABB=ON  PLU=ON  (24730-31-2/BI OR 136109-78-9
              /BI OR 203726-04-9/BI OR 203726-06-1/BI OR 203726-09-4/BI OR
              203726-12-9/BI OR 203726-17-4/BI OR 203726-20-9/BI OR 203726-23
              -2/BI OR 203726-26-5/BI OR 203726-29-8/BI OR 203726-32-3/BI OR
              203726-35-6/BI OR 203726-37-8/BI OR 203726-41-4/BI OR 203726-45
              -8/BI OR 203726-48-1/BI OR 203726-51-6/BI OR 203726-54-9/BI OR
              203741-83-7/BI OR 203741-85-9/BI OR 203741-87-1/BI OR 203741-89
              -3/BI OR 203741-90-6/BI OR 203741-92-8/BI OR 203741-94-0/BI OR
              203741-96-2/BI OR 203741-97-3/BI OR 203741-99-5/BI OR 203742-00
              -1/BI OR 203742-02-3/BI OR 203742-04-5/BI OR 203742-05-6/BI)
L17          958 SEA FILE=REGISTRY ABB=ON  PLU=ON  E[LIV]L[VA]DL/SQSP
L18          201 SEA FILE=REGISTRY ABB=ON  PLU=ON  L17 AND SQL<=10
L19          13  SEA FILE=REGISTRY ABB=ON  PLU=ON  L18 AND CYCL?/NTE
L20          12  SEA FILE=REGISTRY ABB=ON  PLU=ON  L19 NOT L16
L21          3  SEA FILE=REGISTRY ABB=ON  PLU=ON  L20 NOT L13
L22          4  SEA FILE=HCAPLUS ABB=ON  PLU=ON  L21
L23          4  SEA FILE=HCAPLUS ABB=ON  PLU=ON  L22 NOT L15
L24          4  SEA FILE=HCAPLUS ABB=ON  PLU=ON  L14 AND ?INFECT?
L26          2  SEA FILE=HCAPLUS ABB=ON  PLU=ON  L14(L) (?MEDIC? OR ?THERAP? OR
              ?PHARMA? OR ?DRUG?)
L27          1  SEA FILE=HCAPLUS ABB=ON  PLU=ON  L26 NOT (L15 OR L23)
L28          4  SEA FILE=HCAPLUS ABB=ON  PLU=ON  L14 AND LIPOHEPTAPEPTIDE/BI
L29          5  SEA FILE=HCAPLUS ABB=ON  PLU=ON  L14 AND (?HERPE? OR HIV? OR
              ?DEFICIE? OR VESICULAR(L)STOMATITIS OR SEMLIKI?)
L30          11 SEA FILE=HCAPLUS ABB=ON  PLU=ON  (L24 OR L26 OR L27 OR L28 OR
              L29) NOT (L15 OR L23)

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L30 ANSWER 1 OF 11 HCAPLUS COPYRIGHT 2003 ACS

ACCESSION NUMBER: 2002:512686 HCAPLUS

DOCUMENT NUMBER: 138:117265

TITLE: Comparative antibiotic eradication of mycoplasma  
**infections** from continuous cell lines

AUTHOR(S): Uphoff, Cord C.; Drexler, Hans G.

CORPORATE SOURCE: Department of Human and Animal Cell Cultures, DSMZ -  
German Collection of Microorganisms & Cell Cultures,  
Braunschweig, D-38124, GermanySOURCE: In Vitro Cellular & Developmental Biology: Animal  
(2002), 38(2), 86-89

CODEN: IVCAED; ISSN: 1071-2690

PUBLISHER: Society for In Vitro Biology

DOCUMENT TYPE: Journal

LANGUAGE: English

AB Accumulating data implicate mycoplasma contamination as the single biggest problem in the culture of continuous cell lines. Mycoplasma **infection** can affect virtually every parameter and functional activity of the eukaryotic cells. A successful alternative to discarding **infected** cultures is to attempt to eliminate the contaminants by treatment with specific and efficient antimycoplasma antibiotics. The addn. of antibiotics to the culture medium during a limited period of time (1-3 wk) is a simple, inexpensive, and very practical approach for decontaminating continuous cell lines. Here, we examd. the effectiveness of several antibiotic treatment protocols that we have employed routinely in our cell lines bank. On an aggregate, 673 cultures from 236 chronically mycoplasma-pos. cell lines were exposed to one of the following five antibiotic regimens: mycoplasma removal agent (quinolone; a 1-wk treatment), enrofloxacin (quinolone; 1 wk), sparfloxacin (quinolone; 1 wk), ciprofloxacin (quinolone; 2 wk), and BM-Cyclin (alternating tiamulin and minocycline; 3 wk). The mycoplasma **infection** was permanently (as detd. by three solid mycoplasma detection assays) eliminated by the various antibiotics in 66-85% of the cultures treated. Mycoplasma resistance was seen in 7-21%, and loss of the culture as a result of cytotoxically caused cell death occurred in 3-11% of the cultures treated. Overall, 223 of the 236 mycoplasma-pos. cell lines could be cured in a first round of antibiotic treatment with at least one regimen. Taken together, 95% of the mycoplasma-**infected** cell lines were permanently cleansed of the contaminants by antibiotic treatment, which validates this approach as an efficient and tech. simple mycoplasma eradication method.

IT 24730-31-2, Surfactin

RL: PAC (Pharmacological activity); BIOL (Biological study)

(comparative antibiotic eradication of mycoplasma **infections**  
from continuous cell lines)REFERENCE COUNT: 16 THERE ARE 16 CITED REFERENCES AVAILABLE FOR THIS  
RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L30 ANSWER 2 OF 11 HCAPLUS COPYRIGHT 2003 ACS

ACCESSION NUMBER: 2002:316718 HCAPLUS

DOCUMENT NUMBER: 137:195035

TITLE: Susceptibilities of Mycoplasma fermentans and  
Mycoplasma hyorhinitis to membrane-active peptides and  
enrofloxacin in human tissue cell culturesAUTHOR(S): Nir-Paz, Ran; Prevost, Marie-Christine; Nicolas,  
Pierre; Blanchard, Alain; Wroblewski, HenriCORPORATE SOURCE: Unite d'Oncologie Virale, Institut Pasteur, Universite  
de Paris 7, Paris, Fr.

SOURCE: Antimicrobial Agents and Chemotherapy (2002), 46(5),

1218-1225

CODEN: AMACCQ; ISSN: 0066-4804

PUBLISHER: American Society for Microbiology

DOCUMENT TYPE: Journal

LANGUAGE: English

AB Mycoplasmas, which are bacteria that are devoid of a cell wall and which belong to the class Mollicutes, are pathogenic for humans and animals and are frequent contaminants of tissue cell cultures. Although contamination of cultures with mycoplasma can easily be monitored with fluorescent dyes that stain DNA and/or with mol. probes, protection and decontamination of cultures remain serious challenges. In the present work, we investigated the susceptibilities of Mycoplasma fermentans and Mycoplasma hyorhinis to the membrane-active peptides alamethicin, dermaseptin B2, gramicidin S, and surfactin by growth inhibition and lethality assays. In the absence of serum, the four peptides killed mycoplasmas at minimal bactericidal concns. that ranged from 12.5 to 100  $\mu\text{M}$ , but in all cases the activities were decreased by the presence of serum. As a result, under std. culture conditions (10% serum) only alamethicin and gramicidin S were able to inhibit mycoplasma growth (MICs, 50  $\mu\text{M}$ ), while dermaseptin B2 and surfactin were ineffective. Furthermore, 8 days of treatment of HeLa cell cultures exptl. contaminated with either mycoplasma species with 70  $\mu\text{M}$  enrofloxacin cured the cultures of **infection**, whereas treatment with alamethicin and gramicidin S alone was not reliable because the concns. and treatment times required were toxic to the cells. However, combination of alamethicin or gramicidin S with 70  $\mu\text{M}$  enrofloxacin allowed mycoplasma eradication after 30 min or 24 h of treatment, depending on the mycoplasma and peptide considered. HeLa cell cultures exptl. **infected** with mycoplasmas should prove to be a useful model for study of the antimycoplasma activities of antibiotics and membrane-active peptides under conditions close to those found in vivo.

IT 24730-31-2, Surfactin

RL: PAC (Pharmacological activity); THU (Therapeutic use); BIOL (Biological study); USES (Uses)

(susceptibilities of Mycoplasma fermentans and Mycoplasma hyorhinis to membrane-active peptides and enrofloxacin in human tissue cell cultures)

REFERENCE COUNT: 43 THERE ARE 43 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L30 ANSWER 3 OF 11 HCAPLUS COPYRIGHT 2003 ACS

ACCESSION NUMBER: 2001:360335 HCAPLUS

DOCUMENT NUMBER: 135:118640

TITLE: Generality of peptide cyclization catalyzed by isolated thioesterase domains of nonribosomal peptide synthetases

AUTHOR(S): Kohli, Rahul M.; Trauger, John W.; Schwarzer, Dirk; Marahiel, Mohamed A.; Walsh, Christopher T.

CORPORATE SOURCE: Department of Biological Chemistry and Molecular Pharmacology, Harvard Medical School, Boston, MA, 02115, USA

SOURCE: Biochemistry (2001), 40(24), 7099-7108

CODEN: BICHAW; ISSN: 0006-2960

PUBLISHER: American Chemical Society

DOCUMENT TYPE: Journal

LANGUAGE: English

OTHER SOURCE(S): CASREACT 135:118640

AB The C-terminal thioesterase (TE) domains from nonribosomal peptide synthetases (NRPSs) catalyze the final step in the biosynthesis of diverse biol. active mols. In many systems, the thioesterase domain is involved in macrocyclization of a linear precursor presented as an acyl-S-enzyme intermediate. The excised thioesterase domain from the tyrocidine NRPS has been shown to catalyze the cyclization of a peptide thioester substrate which mimics its natural acyl-S-enzyme substrate. In this work

the authors explore the generality of cyclization catalyzed by isolated TE domains. Using synthetic peptide thioester substrates from 6 to 14 residues in length, the authors show that the excised TE domain from the tyrocidine NRPS can be used to generate an array of sizes of cyclic peptides with comparable kinetic efficiency. The authors also studied the excised TE domains from the NRPSs which biosynthesize the sym. cyclic decapeptide gramicidin S and the cyclic **lipopeptide** surfactin A. Both TE domains exhibit expected cyclization activity: the TE domain from the gramicidin S NRPS catalyzes head-to-tail cyclization of a decapeptide thioester to form gramicidin S, and the TE domain from the surfactin NRPS catalyzes stereospecific cyclization to form a macrolactone analog of surfactin. With an eye toward generating libraries of cyclic mols. by TE catalysis, the authors report the solid-phase synthesis and TE-mediated cyclization of a small pool of linear peptide thioesters. These studies provide evidence for the general utility of TE catalysis as a means to synthesize a wide range of macrocyclic compds.

IT 136109-78-9, Surfactin A

RL: BSU (Biological study, unclassified); BIOL (Biological study)  
(peptide cyclization catalyzed by isolated thioesterase and surfactin thioesterase domains of nonribosomal peptide synthetases)

REFERENCE COUNT: 34 THERE ARE 34 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L30 ANSWER 4 OF 11 HCAPLUS COPYRIGHT 2003 ACS

ACCESSION NUMBER: 1999:282074 HCAPLUS

DOCUMENT NUMBER: 130:316598

TITLE: Targetable lipid vesicle particles for detection and treatment of cells

INVENTOR(S): Clarke, David John; Harrison, Michael Henry

PATENT ASSIGNEE(S): The Victoria University of Manchester, UK

SOURCE: PCT Int. Appl., 60 pp.

CODEN: PIXXD2

DOCUMENT TYPE: Patent

LANGUAGE: English

FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 9920252	A1	19990429	WO 1998-GB3071	19981014
W:	AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, CA, CH, CN, CU, CZ, DE, DK, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MD, MG, MK, MN, MW, MX, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, UA, UG, US, UZ, VN, YU, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM			
RW:	GH, GM, KE, LS, MW, SD, SZ, UG, ZW, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, BF, BJ, CF, CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG			
CA 2306972	AA	19990429	CA 1998-2306972	19981014
AU 9895473	A1	19990510	AU 1998-95473	19981014
AU 742846	B2	20020117		
EP 1023047	A1	20000802	EP 1998-949090	19981014
R:	AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, PT, IE, FI			
JP 2001520185	T2	20011030	JP 2000-516652	19981014
NO 2000001976	A	20000615	NO 2000-1976	20000414
PRIORITY APPLN. INFO.:			GB 1997-21901	A 19971016
			WO 1998-GB3071	W 19981014

AB Lipid vesicle particles are disclosed which are capable of being targeted to a cell type of interest, said particle incorporating a peptide which is responsive to a predetd. metabolic signal from the targeted cell so as to modulate the permeability of the particle, said particle further incorporating a species to be targeted to the cell which is activated on said modulation of permeability. The particles may be used in methods for

detecting cells, methods of treating cells and also therapeutically, e.g., in cancer therapy. The method can be applied also to detection and removal of pathogenic cells in a water source.

IT 24730-31-2, Surfactin

RL: BAC (Biological activity or effector, except adverse); BPR (Biological process); BSU (Biological study, unclassified); DEV (Device component use); PEP (Physical, engineering or chemical process); THU (Therapeutic use); BIOL (Biological study); PROC (Process); USES (Uses)  
(targetable lipid vesicle particles for detection and treatment of cells)

REFERENCE COUNT: 7 THERE ARE 7 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L30 ANSWER 5 OF 11 HCAPLUS COPYRIGHT 2003 ACS

ACCESSION NUMBER: 1998:496787 HCAPLUS

DOCUMENT NUMBER: 129:257424

TITLE: Separation and characterization of surfactin isoforms produced by *Bacillus subtilis* OKB 105

AUTHOR(S): Kowall, Martin; Vater, Joachim; Kluge, Britta; Stein, Torsten; Franke, Peter; Ziessow, Dieter

CORPORATE SOURCE: Iwan N. Stranski Institut für Physikalische und Theoretische Chemie, Technische Universität Berlin, Berlin, D-10623, Germany

SOURCE: Journal of Colloid and Interface Science (1998), 204(1), 1-8

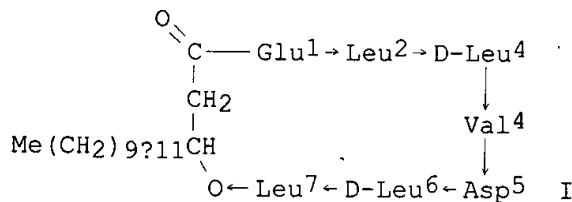
CODEN: JCISA5; ISSN: 0021-9797

PUBLISHER: Academic Press

DOCUMENT TYPE: Journal

LANGUAGE: English

GI



AB Natural surfactin is a mixt. of cyclic lipopeptides I built from variants of a heptapeptide and a .beta.-hydroxy fatty acid with chain lengths of 13-15 carbon atoms. The lipopeptide biosurfactant was produced by *Bacillus subtilis* OKB 105 and part of the material subjected to esterification of its Glu and Asp residues. High-resoln. preparative reversed phase HPLC on EnCaPharm 100 of surfactin and its monomethyl and di-Me esters yielded 44 fractions which were characterized by NMR and MS methods. Among the sepd. isoforms are the known surfactin variants with L-Leu, L-Val, or L-Ile in position 7 of the peptide ring and three hitherto unknown variants showing replacements of the leucine residues in position 2 and/or 7 by L-Val and L-Ile. This work makes available **lipopeptide** compds. with modified structures and different hydrophobicities which promise to have potential for biotech. and pharmaceutical applications. (c) 1998 Academic Press.

IT 86711-55-9, Surfactin C2 136109-79-0, Surfactin B1

213535-66-1 213535-69-4 213535-71-8

213535-74-1 213535-76-3 213535-78-5 .

213535-80-9 213535-82-1 213535-84-3

RL: BOC (Biological occurrence); BSU (Biological study, unclassified); RCT (Reactant); BIOL (Biological study); OCCU (Occurrence); RACT (Reactant or reagent)

(sepn. and characterization of surfactin isoforms produced by *Bacillus subtilis* OKB 105)

IT 213535-90-1P 213535-91-2P 213535-92-3P  
 213535-93-4P 213535-94-5P 213535-96-7P  
 213535-97-8P 213535-99-0P 213536-06-2P  
 213536-08-4P 213536-11-9P 213536-12-0P  
 213536-14-2P 213536-15-3P 213536-16-4P  
 213536-17-5P 213536-18-6P 213536-20-0P  
 213603-93-1P 213603-94-2P 213603-95-3P  
 213603-97-5P 213603-99-7P 213604-01-4P  
 213604-03-6P 213604-05-8P 213604-08-1P  
 213604-10-5P

RL: SPN (Synthetic preparation); PREP (Preparation)

(sepn. and characterization of surfactin isoforms produced by *Bacillus subtilis* OKB 105)

REFERENCE COUNT: 39 THERE ARE 39 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L30 ANSWER 6 OF 11 HCAPLUS COPYRIGHT 2003 ACS

ACCESSION NUMBER: 1997:114272 HCAPLUS

DOCUMENT NUMBER: 126:237560

TITLE: Foaming properties of a natural cyclic **lipoheptapeptide** belonging to a special class of amphiphilic molecules

AUTHOR(S): Razafindralambo, Hary; Paquot, Michel; Baniel, Alain; Popineau, Yves; Hbid, Choukri; Jacques, Philippe; Thonart, Philippe

CORPORATE SOURCE: Fac. Univ. Sci. Agronomiques, Gembloux, B-5030, Belg.

SOURCE: Food Hydrocolloids (1997), 11(1), 59-62

CODEN: FOHYES; ISSN: 0268-005X

PUBLISHER: Oxford University Press

DOCUMENT TYPE: Journal

LANGUAGE: English

AB The foaming properties of surfactin, a natural cyclic **lipoheptapeptide** from *Bacillus subtilis*, were investigated in comparison and in assocn. with those of bovine serum albumin (BSA). An app. combining bubbling, optical and conductimetric methods was used to study continuous foam formation and stability in terms of the quantity and d. of foam. The increase in surfactin concn. from 0.05 to 0.2 mg/mL had little effect on its foaming capacity, measured by the bubbling time to produce the required foam vol., but improved the foam max. d. significantly. Surfactin produced foam with higher max. d. and stability, and formed more regular and smaller bubbles than BSA. In addn., a synergistic effect was obsd. on the stability of liq. in foam prepd. with a mixt. of 50:50 surfactin/BSA. The liq. half-life of BSA foam was enhanced up to 40% when surfactin was added to the soln.

IT 24730-31-2, Surfactin

RL: PEP (Physical, engineering or chemical process); PROC (Process)

(foaming properties of a natural cyclic **lipoheptapeptide** belonging to a special class of amphiphilic mols.)

L30 ANSWER 7 OF 11 HCAPLUS COPYRIGHT 2003 ACS

ACCESSION NUMBER: 1994:476168 HCAPLUS

DOCUMENT NUMBER: 121:76168

TITLE: Plant disease control by iturin peptides

INVENTOR(S): Shoda, Makoto; Sato, Hajime

PATENT ASSIGNEE(S): Showa Denko Kk, Japan

SOURCE: Jpn. Kokai Tokkyo Koho, 7 pp.

CODEN: JKXXAF

DOCUMENT TYPE: Patent

LANGUAGE: Japanese

FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:



PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 06135811	A2	19940517	JP 1992-288963	19921027
JP 3237240	B2	20011210		

PRIORITY APPLN. INFO.: JP 1992-288963 19921027  
 OTHER SOURCE(S): MARPAT 121:76168

AB A microbicide contains combination of .gtoreq. 1 peptide selected from iturin peptides and .gtoreq. 1 peptide selected from surfactin peptides. The antimicrobial activity of iturin peptides is remarkably increased in the presence of the surfactin peptides. A combination of iturin peptides 5 and surfactin peptides 10 ppm inhibited .gtoreq. 90 the growth of *Alternaria mali*, *Fusarium oxysporum*, *Rhizoctonia solani*, *Botrytis cinerea*, etc. These peptides are not environmental pollutants.

IT **24730-31-2**, Surfactin  
 RL: BIOL (Biological study)  
 (peptides, mixt. with iturin peptides, as microbicides)

L30 ANSWER 8 OF 11 HCAPLUS COPYRIGHT 2003 ACS  
 ACCESSION NUMBER: 1993:510378 HCAPLUS  
 DOCUMENT NUMBER: 119:110378  
 TITLE: Characterization of the *srfA* locus of *Bacillus subtilis*: only the valine-activating domain of *srfA* is involved in the establishment of genetic competence  
 AUTHOR(S): van Sinderen, Douwe; Galli, Giuliano; Cosmina, Paola; de Ferra, Francesca; Withoff, Sebo; Venema, Gerard; Grandi, Guido  
 CORPORATE SOURCE: Dep. Genet., Cent. Biol. Sci., Haren, NL-9751 NN, Neth.  
 SOURCE: Molecular Microbiology (1993), 8(5), 833-41  
 CODEN: MOMIEE; ISSN: 0950-382X  
 DOCUMENT TYPE: Journal  
 LANGUAGE: English

AB *SrfA* is a locus required for the prodn. of the lipopeptide antibiotic surfactin and for efficient sporulation and competence development. Mutations in the 5' portion of the *srfA* operon affect all 3 of these processes, whereas mutations in the 3' portion of *srfA* only affect sporulation and surfactin prodn. Anal. of the proteins encoded by the *sefA* locus revealed 7 large domains which are likely to be responsible for the activation and binding of the 7 amino acids of surfactin. Identification of the amino acid that is activated by the *srfA* domains was detd. by amino acid-dependent pyrophosphate exchange reactions on partially purified cell exts. of strains carrying different *srfA* mutations. These results indicate colinearity between the order of the domains in the *srfA* locus and the amino acid sequence of surfactin. The minimal genetic element of *srfA* required for the establishment of competence was the 5' region of the 2nd open reading frame of *srfA*, which encodes the valine activation domain. This portion of *srfA*, when cloned on a plasmid, complemented the competence **deficiency** of a *srfA* deletion mutant in trans.

IT **24730-31-2**, Surfactin  
 RL: PRP (Properties)  
 (colinearity of domains of *srfA* locus and amino acid sequence of)

L30 ANSWER 9 OF 11 HCAPLUS COPYRIGHT 2003 ACS  
 ACCESSION NUMBER: 1993:466479 HCAPLUS  
 DOCUMENT NUMBER: 119:66479  
 TITLE: Structural and functional organization of the surfactin synthetase multienzyme system  
 AUTHOR(S): Menkhaus, Martina; Ullrich, Christian; Kluge, Britta; Vater, Joachim; Vollenbroich, Dirk; Kamp, Roza Maria  
 CORPORATE SOURCE: Inst. Biochem. Mol. Biol., Tech. Univ. Berlin, Berlin, D-1000/10, Germany

SOURCE: Journal of Biological Chemistry (1993), 268(11), 7678-84  
CODEN: JBCHA3; ISSN: 0021-9258

DOCUMENT TYPE: Journal

LANGUAGE: English

AB By gel filtration of a crude ext. of *Bacillus subtilis* ATCC 21332 and OKB 105, the multienzyme system that forms the **lipopeptide** surfactin was sepd. into three enzyme fractions, E1, E2, and E3. E1, which appeared near the exclusion limit of the column, activates all amino acid components of surfactin as aminoacyladenylates and thioesters according to the thioester mechanism. In addn., a leucine-activating enzyme (E2) and an acyltransferase (E3) were detected that show mol. masses of .apprx.160 and 40 kDa, resp. The surfactin synthetase multienzyme system was reconstituted by complementation of all three enzyme fractions, yielding high rates of lipopeptide formation. E1 is composed of two multifunctional polypeptides (E1A and E1B) with mol. masses of 460 and 435 kDa, resp., that can be sepd. by high-resoln. anion-exchange chromatog. on Pharmacia Mono Q. E1A binds L-Glu and L-Leu in a molar ratio of 1:2, whereas E1B incorporates L-Val, L-Asp, and L-Leu in a molar ratio of 1:1:1. The hydroxy fatty acid moiety is contributed by the acyltransferase accepting the hydroxy fatty acid CoA thioester as substrate. The transfer of the hydroxy fatty acid to E1A and the formation of the hydroxyacyl-L-glutamate intermediate are the initiation steps in the biosynthesis of surfactin. The amino acid-activating enzyme components E1A, E1B, and E2 have been highly purified and partially characterized.

IT **24730-31-2**, Surfactin  
RL: MFM (Metabolic formation); BIOL (Biological study); FORM (Formation, nonpreparative)  
(formation of, by surfactin synthetase multienzyme system of *Bacillus subtilis*)

L30 ANSWER 10 OF 11 HCAPLUS COPYRIGHT 2003 ACS

ACCESSION NUMBER: 1989:609851 HCAPLUS

DOCUMENT NUMBER: 111:209851

TITLE: Cloning and characterization of *srfB*, a regulatory gene involved in surfactin production and competence in *Bacillus subtilis*

AUTHOR(S): Nakano, Michiko M.; Zuber, Peter

CORPORATE SOURCE: Dep. Bot. Microbiol., Oklahoma State Univ., Stillwater, OK, 74078, USA

SOURCE: Journal of Bacteriology (1989), 171(10), 5347-53  
CODEN: JOBAA; ISSN: 0021-9193

DOCUMENT TYPE: Journal

LANGUAGE: English

AB A Tn917 insertion mutation *srfB* impairs the prodn. of the lipopeptide antibiotic surfactin in *B. subtilis*. Gene *srfB* is located between *aroG* and *ald* in the *B. subtilis* genome, as detd. by phage PBS1 transduction mapping, and is not linked to the previously described surfactin loci *sfp* of *srfA*. A *srfB* mutant was found to be also **deficient** in the establishment of competence. SP.beta. phage-mediated complementation anal. showed that both competence and surfactin prodn. were restored in the *srfB* mutant by a single DNA fragment of 1.5 kilobase pairs. The sequence of the complementing DNA revealed that the *srfB* gene is *comA*, an early competence gene which codes for a product similar to that of the activator class of bacterial 2-component regulatory systems. The *srfB* mutation impaired the expression of a *srfA-lacZ* fusion, suggesting that surfactin prodn. is pos. regulated at the transcriptional level by the *srfB* (*comA*) gene product.

IT **24730-31-2**, Surfactin  
RL: FORM (Formation, nonpreparative)  
(formation of, by *Bacillus subtilis*, gene *srfB* effect on)

L30 ANSWER 11 OF 11 HCAPLUS COPYRIGHT 2003 ACS

ACCESSION NUMBER: 1983:95551 HCAPLUS

DOCUMENT NUMBER: 98:95551

TITLE: Vaginal absorption of a potent luteinizing hormone-releasing hormone analog (leuprolide) in rats. I: Absorption by various routes and absorption enhancement

AUTHOR(S): Okada, Hiroaki; Yamazaki, Iwao; Ogawa, Yasuaki; Hirai, Shinichiro; Yashiki, Takatsuka; Mima, Hiroyuki

CORPORATE SOURCE: Cent. Res. Div., Takeda Chem. Ind., Ltd., Yodogawa, 532, Japan

SOURCE: Journal of Pharmaceutical Sciences (1982), 71(12), 1367-71

CODEN: JPMSAE; ISSN: 0022-3549

DOCUMENT TYPE: Journal

LANGUAGE: English

AB The absorption of leuprolide [53714-56-0] by different routes was evaluated by detg. the ovulation-inducing activity in diestrous rats. Vaginal administration showed the greatest potency among nonparenteral routes and was followed successively by rectal, nasal, and oral administration. A mixed micellar soln. with monoolein [25496-72-4]-bile acids improved the intestinal absorption of leuprolide, and nasal absorption was enhanced by adding Na glycocholate [863-57-0], surfactin [24730-31-2], or polyoxyethylene 9 lauryl ether [9002-92-0], but these bioavailabilities were still insufficient. The vaginal absorption was enhanced by citric acid [77-92-9], succinic acid [110-15-6], tartaric acid [87-69-4], and glycocholic acid [475-31-0]; the abs. bioavailability increased to approx. 20%. The vaginal absorption from jellies, as practical dosage forms, yielded sufficient activity of leuprolide, but absorption was slightly reduced with highly polar polymers or with higher concns. of polymers. Vaginal administration of leuprolide can be a rational dosage method for long-term antitumor **therapy**.

=>

=>

=> select hitrn l30 1-11

'HITRN' IS NOT A VALID FIELD CODE FOR FILE 'HCAPLUS'

ENTER DISPLAY CODE (TI) OR ?:end

=> select hit rn l30 1-11

E1 THROUGH E41 ASSIGNED

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FILE 'REGISTRY' ENTERED AT 14:30:41 ON 28 APR 2003

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STRUCTURE FILE UPDATES: 27 APR 2003 HIGHEST RN 506405-59-0

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Experimental and calculated property data are now available. See HELP PROPERTIES for more information. See STNote 27, Searching Properties in the CAS Registry File, for complete details:  
<http://www.cas.org/ONLINE/STN/STNOTES/stnotes27.pdf>

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FILE 'REGISTRY' ENTERED AT 14:30:41 ON 28 APR 2003  
 L31 41 S E1-E41

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L31 ANSWER 1 OF 41 REGISTRY COPYRIGHT 2003 ACS  
 RN 213604-10-5 REGISTRY  
 CN Surfactin A3, 3-L-valine-, monomethyl ester (9CI) (CA INDEX NAME)  
 FS PROTEIN SEQUENCE; STEREOSEARCH  
 MF C51 H89 N7 O13  
 CI IDS  
 SR CA  
 LC STN Files: CA, CAPLUS

\*\*RELATED SEQUENCES AVAILABLE WITH SEQLINK\*\*

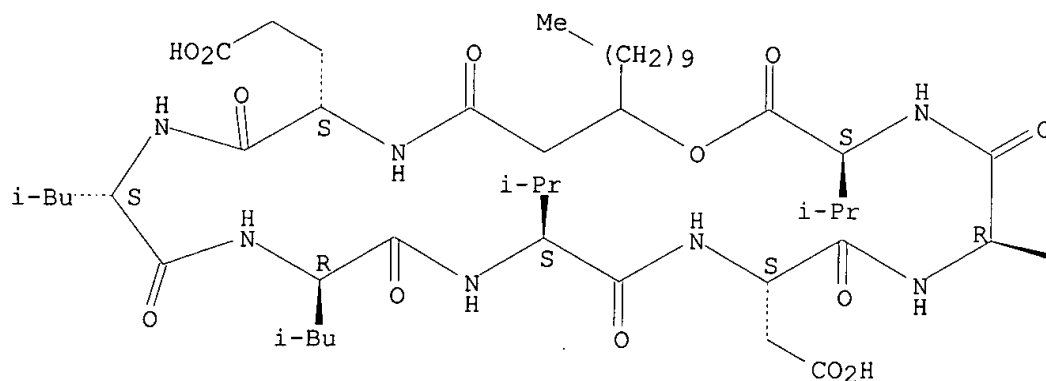
CM 1

CRN 213604-09-2  
 CMF C50 H87 N7 O13

\*\*RELATED SEQUENCES AVAILABLE WITH SEQLINK\*\*

Absolute stereochemistry.

PAGE 1-A



PAGE 1-B

Bu-i

CM 2

CRN 67-56-1  
CMF C H4 OH<sub>3</sub>C-OH1 REFERENCES IN FILE CA (1957 TO DATE)  
1 REFERENCES IN FILE CAPLUS (1957 TO DATE)

REFERENCE 1: 129:257424

L31 ANSWER 2 OF 41 REGISTRY COPYRIGHT 2003 ACS  
RN 213604-08-1 REGISTRY  
CN Cyclo(L-.alpha.-aspartyl-D-leucyl-L-valyl-3-hydroxytetradecanoyl-L-.alpha.-glutamyl-L-isoleucyl-D-leucyl-L-valyl), monomethyl ester (9CI) (CA INDEX NAME)  
FS PROTEIN SEQUENCE; STEREOSEARCH  
MF C52 H91 N7 O13  
CI IDS  
SR CA  
LC STN Files: CA, CAPLUS

\*\*RELATED SEQUENCES AVAILABLE WITH SEQLINK\*\*

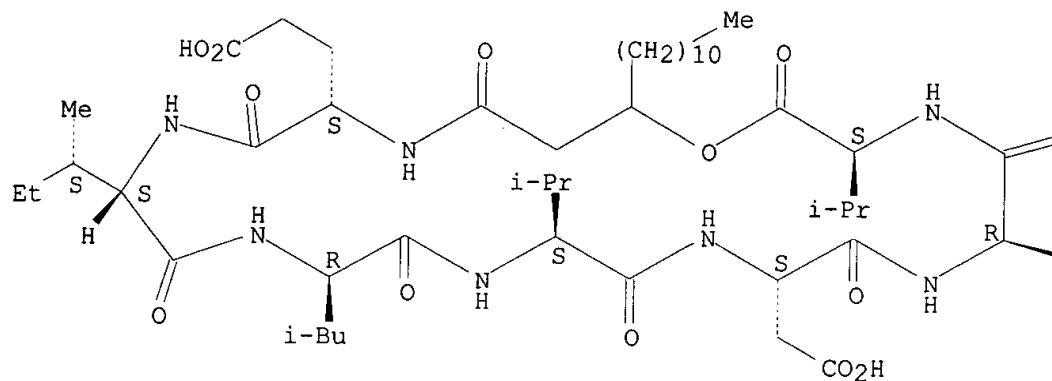
CM 1

CRN 213604-07-0  
CMF C51 H89 N7 O13

\*\*RELATED SEQUENCES AVAILABLE WITH SEQLINK\*\*

Absolute stereochemistry.

PAGE 1-A



PAGE 1-B

=O

Bu-i

CM 2

CRN 67-56-1

CMF C H4 O

H<sub>3</sub>C-OH

1 REFERENCES IN FILE CA (1957 TO DATE)

1 REFERENCES IN FILE CAPLUS (1957 TO DATE)

REFERENCE 1: 129:257424

L31 ANSWER 3 OF 41 REGISTRY COPYRIGHT 2003 ACS

RN 213604-05-8 REGISTRY

CN Cyclo(L-.alpha.-aspartyl-D-leucyl-L-valyl-3-hydroxytetradecanoyl-L-.alpha.-glutamyl-L-valyl-D-leucyl-L-valyl), monomethyl ester (9CI) (CA INDEX NAME)

FS PROTEIN SEQUENCE; STEREOSEARCH

MF C51 H89 N7 O13

CI IDS

SR CA

LC STN Files: CA, CAPLUS

\*\*RELATED SEQUENCES AVAILABLE WITH SEQLINK\*\*

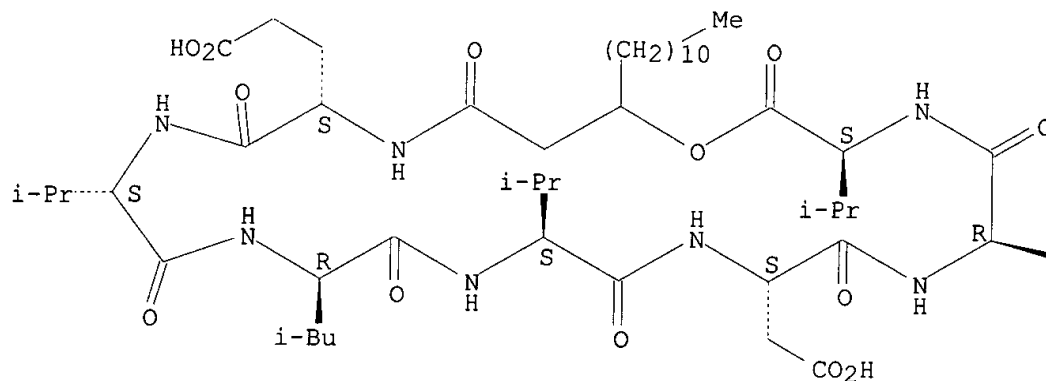
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CRN 213604-04-7  
CMF C50 H87 N7 O13

\*\*RELATED SEQUENCES AVAILABLE WITH SEQLINK\*\*

Absolute stereochemistry.

PAGE 1-A



PAGE 1-B

Bu-i

CM 2

CRN 67-56-1  
CMF C H4 O

H<sub>3</sub>C-OH

1 REFERENCES IN FILE CA (1957 TO DATE)  
1 REFERENCES IN FILE CAPLUS (1957 TO DATE)

REFERENCE 1: 129:257424

L31 ANSWER 4 OF 41 REGISTRY COPYRIGHT 2003 ACS  
RN 213604-03-6 REGISTRY  
CN Cyclo(L-.alpha.-aspartyl-D-leucyl-L-valyl-3-hydroxypentadecanoyl-L-.alpha.-glutamyl-L-isoleucyl-D-leucyl-L-valyl), monomethyl ester (9CI) (CA INDEX NAME)  
FS PROTEIN SEQUENCE; STEREOSEARCH  
MF C53 H93 N7 O13

CI IDS  
 SR CA  
 LC STN Files: CA, CAPLUS

\*\*RELATED SEQUENCES AVAILABLE WITH SEQLINK\*\*

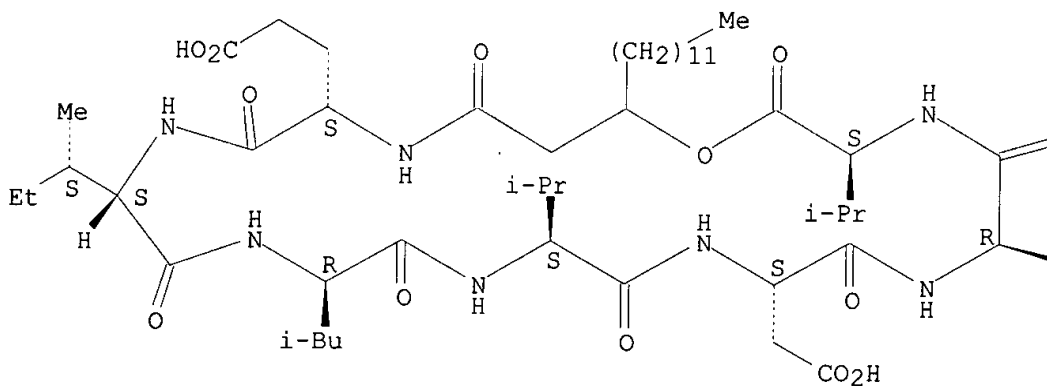
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 CMF C52 H91 N7 O13

\*\*RELATED SEQUENCES AVAILABLE WITH SEQLINK\*\*

Absolute stereochemistry.

PAGE 1-A



PAGE 1-B

=O

—Bu-i

CM 2

CRN 67-56-1  
 CMF C H4 O

H<sub>3</sub>C—OH

1 REFERENCES IN FILE CA (1957 TO DATE)  
 1 REFERENCES IN FILE CAPLUS (1957 TO DATE)

REFERENCE 1: 129:257424



L31 ANSWER 5 OF 41 REGISTRY COPYRIGHT 2003 ACS  
 RN 213604-01-4 REGISTRY  
 CN Pumilacidin F, 4-(3-hydroxypentadecanoic acid)-8-L-valine-, monomethyl  
 ester (9CI) (CA INDEX NAME)  
 FS PROTEIN SEQUENCE; STEREOSEARCH  
 MF C53 H93 N7 O13  
 CI IDS  
 SR CA  
 LC STN Files: CA, CAPLUS

\*\*RELATED SEQUENCES AVAILABLE WITH SEQLINK\*\*

CM 1

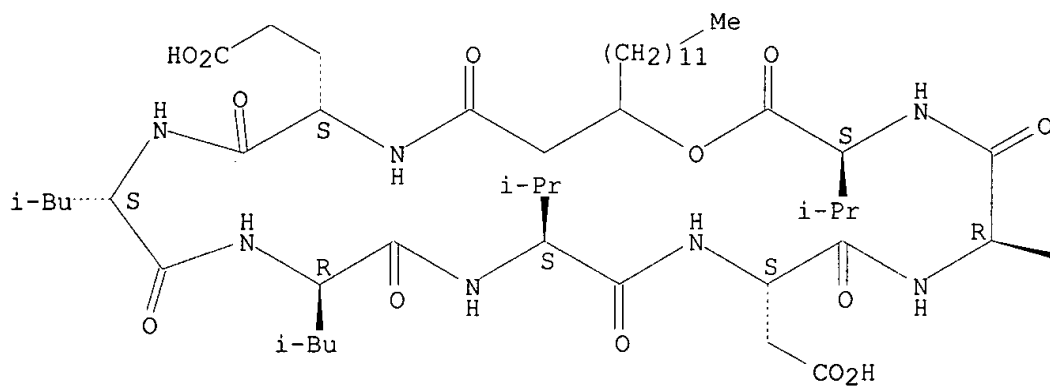
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CMF C52 H91 N7 O13

\*\*RELATED SEQUENCES AVAILABLE WITH SEQLINK\*\*

Absolute stereochemistry.

PAGE 1-A



PAGE 1-B

Bu-i

CM 2

CRN 67-56-1

CMF C H4 O

H<sub>3</sub>C-OH

1 REFERENCES IN FILE CA (1957 TO DATE)  
1 REFERENCES IN FILE CAPLUS (1957 TO DATE)

REFERENCE 1: 129:257424

L31 ANSWER 6 OF 41 REGISTRY COPYRIGHT 2003 ACS  
RN 213603-99-7 REGISTRY  
CN Surfactin B2, 3-L-isoleucine-, monomethyl ester (9CI) (CA INDEX NAME)  
FS PROTEIN SEQUENCE; STEREOSEARCH  
MF C53 H93 N7 O13  
CI IDS  
SR CA  
LC STN Files: CA, CAPLUS

\*\*RELATED SEQUENCES AVAILABLE WITH SEQLINK\*\*

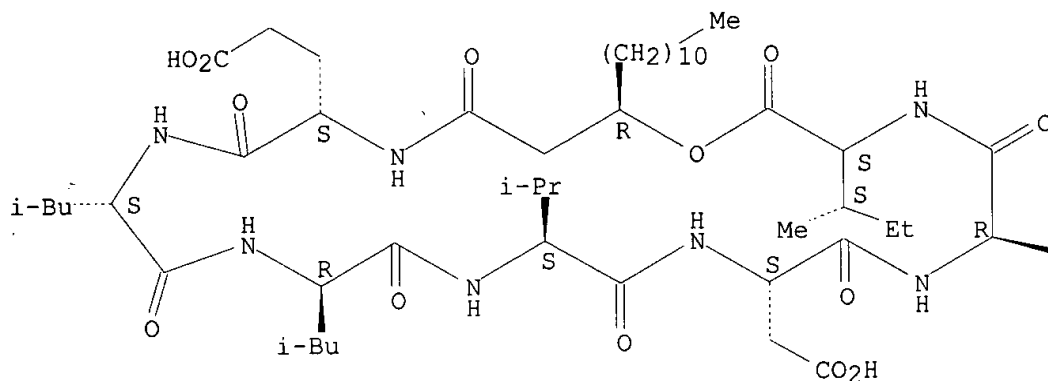
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CRN 213603-98-6  
CMF C52 H91 N7 O13


\*\*RELATED SEQUENCES AVAILABLE WITH SEQLINK\*\*

Absolute stereochemistry.

PAGE 1-A



PAGE 1-B

 Bu-i

CM 2

CRN 67-56-1

CMF C H4 O

H<sub>3</sub>C-OH

1 REFERENCES IN FILE CA (1957 TO DATE)  
 1 REFERENCES IN FILE CAPLUS (1957 TO DATE)

REFERENCE 1: 129:257424

L31 ANSWER 7 OF 41 REGISTRY COPYRIGHT 2003 ACS

RN 213603-97-5 REGISTRY

CN Cyclo(L-.alpha.-aspartyl-D-leucyl-L-isoleucyl-3-hydroxypentadecanoyl-L-.alpha.-glutamyl-L-isoleucyl-D-leucyl-L-valyl), monomethyl ester (9CI)  
 (CA INDEX NAME)

FS PROTEIN SEQUENCE; STEREOSEARCH

MF C54 H95 N7 O13

CI IDS

SR CA

LC STN Files: CA, CAPLUS

\*\*RELATED SEQUENCES AVAILABLE WITH SEQLINK\*\*

CM 1

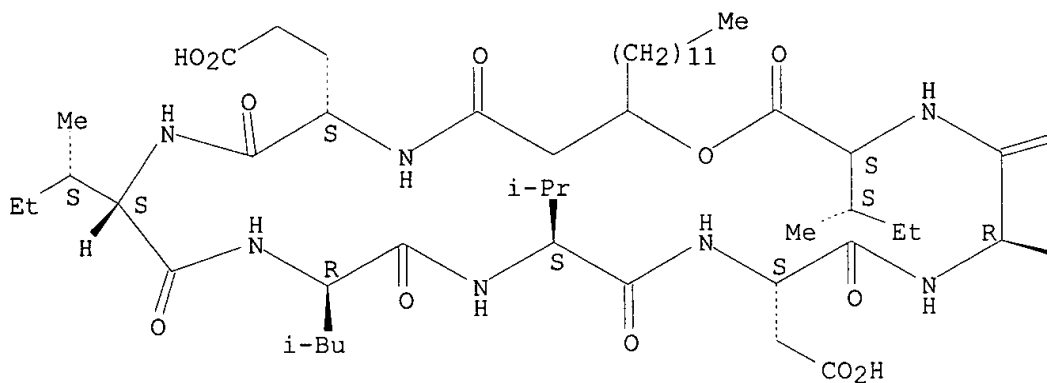
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CMF C53 H93 N7 O13

\*\*RELATED SEQUENCES AVAILABLE WITH SEQLINK\*\*

Absolute stereochemistry.

PAGE 1-A



$\equiv O$  $\diagup Bu-i$ 

CM 2

CRN 67-56-1

CMF C H4 O

 $H_3C-OH$ 

1 REFERENCES IN FILE CA (1957 TO DATE)

1 REFERENCES IN FILE CAPLUS (1957 TO DATE)

REFERENCE 1: 129:257424

L31 ANSWER 8 OF 41 REGISTRY COPYRIGHT 2003 ACS

RN **213603-95-3** REGISTRY

CN Surfactin C2, 3-L-valine-, monomethyl ester (9CI) (CA INDEX NAME)

FS PROTEIN SEQUENCE; STEREOSEARCH

MF C53 H93 N7 O13

CI IDS

SR CA

LC STN Files: CA, CAPLUS

\*\*RELATED SEQUENCES AVAILABLE WITH SEQLINK\*\*

CM 1

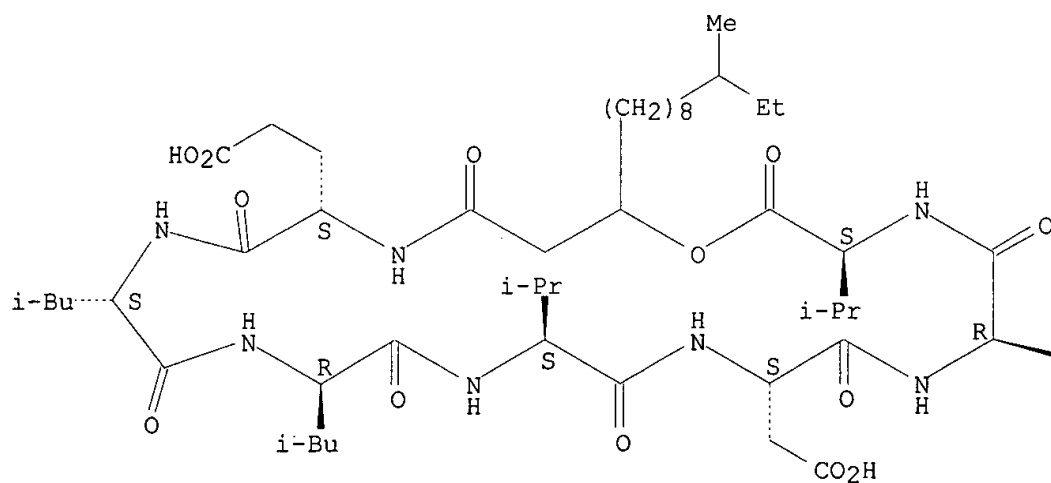
CRN 213535-76-3

CMF C52 H91 N7 O13

\*\*RELATED SEQUENCES AVAILABLE WITH SEQLINK\*\*

Absolute stereochemistry.

PAGE 1-A



PAGE 1-B

i-Bu

CM 2

CRN 67-56-1  
CMF C H4 O

H<sub>3</sub>C-OH

1 REFERENCES IN FILE CA (1957 TO DATE)  
1 REFERENCES IN FILE CAPLUS (1957 TO DATE)

REFERENCE 1: 129:257424

L31 ANSWER 9 OF 41 REGISTRY COPYRIGHT 2003 ACS  
RN **213603-94-2** REGISTRY  
CN Surfactin B1, monomethyl ester (9CI) (CA INDEX NAME)  
FS PROTEIN SEQUENCE; STEREOSEARCH  
MF C53 H93 N7 O13  
CI IDS  
SR CA

LC STN Files: CA, CAPLUS

\*\*RELATED SEQUENCES AVAILABLE WITH SEQLINK\*\*

CM 1

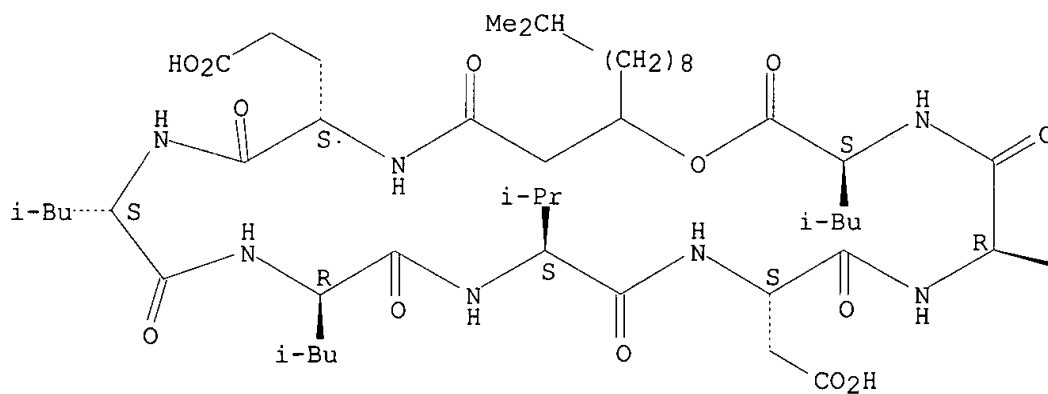
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CMF C52 H91 N7 O13

\*\*RELATED SEQUENCES AVAILABLE WITH SEQLINK\*\*

Absolute stereochemistry.  
Currently available stereo shown.

PAGE 1-A



PAGE 1-B

$\text{Bu-i}$

CM 2

CRN 67-56-1

CMF C H4 O

H<sub>3</sub>C-OH

1 REFERENCES IN FILE CA (1957 TO DATE)  
1 REFERENCES IN FILE CAPLUS (1957 TO DATE)

REFERENCE 1: 129:257424

L31 ANSWER 10 OF 41 REGISTRY COPYRIGHT 2003 ACS

RN 213603-93-1 REGISTRY  
 CN Cyclo(L-.alpha.-aspartyl-D-leucyl-L-valyl-3-hydroxytridecanoyl-L-.alpha.-glutamyl-L-isoleucyl-D-leucyl-L-valyl), monomethyl ester (9CI) (CA INDEX NAME)  
 FS PROTEIN SEQUENCE; STEREOSEARCH  
 MF C51 H89 N7 O13  
 CI IDS  
 SR CA  
 LC STN Files: CA, CAPLUS

\*\*RELATED SEQUENCES AVAILABLE WITH SEQLINK\*\*

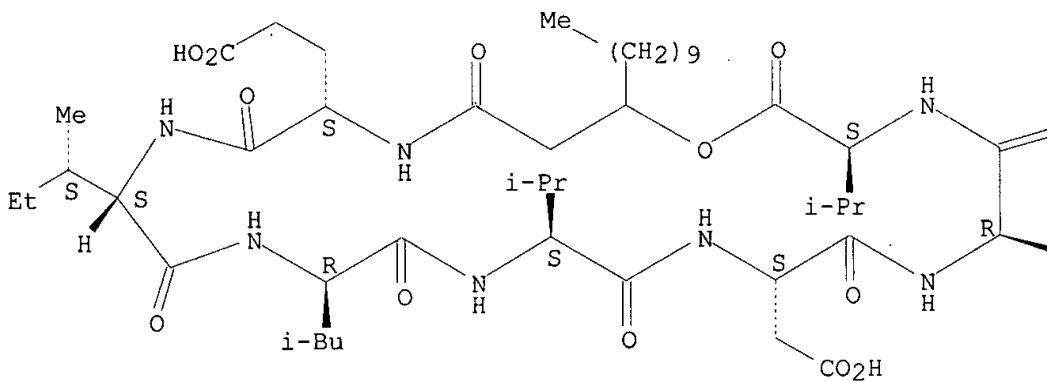
CM 1

CRN 213535-66-1  
 CMF C50 H87 N7 O13

\*\*RELATED SEQUENCES AVAILABLE WITH SEQLINK\*\*

Absolute stereochemistry.

PAGE 1-A



PAGE 1-B

=O

= Bu-i

CM 2

CRN 67-56-1  
 CMF C H4 O

H<sub>3</sub>C-OH

1 REFERENCES IN FILE CA (1957 TO DATE)  
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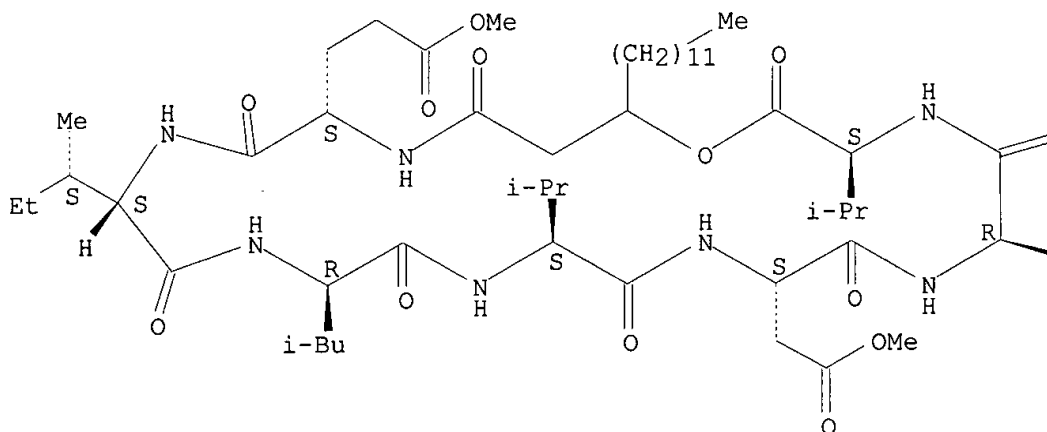
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L31 ANSWER 11 OF 41 REGISTRY COPYRIGHT 2003 ACS  
 RN 213536-20-0 REGISTRY  
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 FS PROTEIN SEQUENCE; STEREOSEARCH  
 MF C54 H95 N7 O13  
 SR CA  
 LC STN Files: CA, CAPLUS

\*\*RELATED SEQUENCES AVAILABLE WITH SEQLINK\*\*

Absolute stereochemistry.

PAGE 1-A



PAGE 1-B

=O

Bu-i

1 REFERENCES IN FILE CA (1957 TO DATE)  
 1 REFERENCES IN FILE CAPLUS (1957 TO DATE)

REFERENCE 1: 129:257424

L31 ANSWER 12 OF 41 REGISTRY COPYRIGHT 2003 ACS  
 RN 213536-18-6 REGISTRY  
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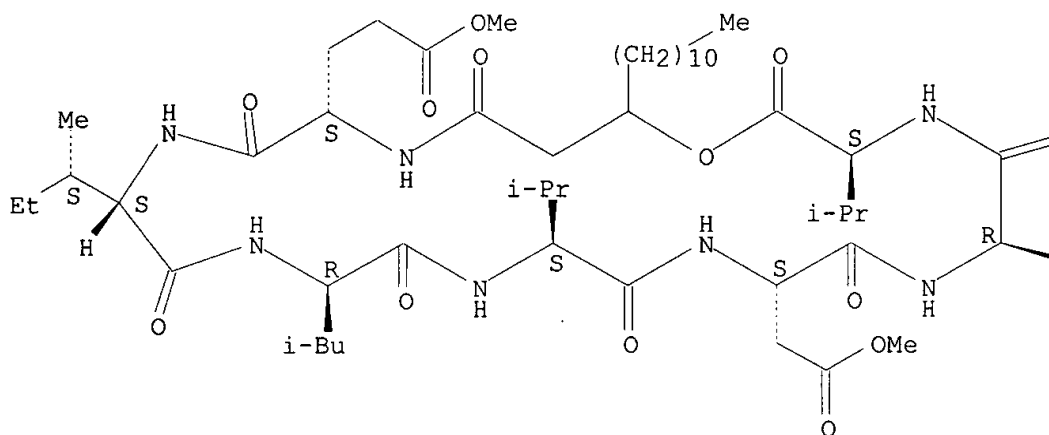


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 FS PROTEIN SEQUENCE; STEREOSEARCH  
 MF C53 H93 N7 O13  
 SR CA  
 LC STN Files: CA, CAPLUS

\*\*RELATED SEQUENCES AVAILABLE WITH SEQLINK\*\*

Absolute stereochemistry.

PAGE 1-A



PAGE 1-B

=O

= Bu-i

1 REFERENCES IN FILE CA (1957 TO DATE)  
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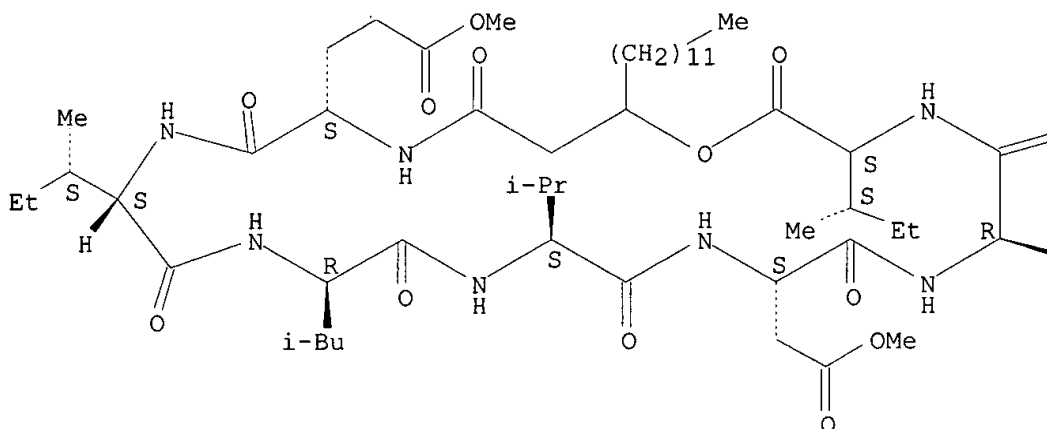
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L31 ANSWER 13 OF 41 REGISTRY COPYRIGHT 2003 ACS  
 RN **213536-17-5** REGISTRY  
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 FS PROTEIN SEQUENCE; STEREOSEARCH  
 MF C55 H97 N7 O13  
 SR CA  
 LC STN Files: CA, CAPLUS

\*\*RELATED SEQUENCES AVAILABLE WITH SEQLINK\*\*

Absolute stereochemistry.

PAGE 1-A



PAGE 1-B

=O

Bu-i

1 REFERENCES IN FILE CA (1957 TO DATE)  
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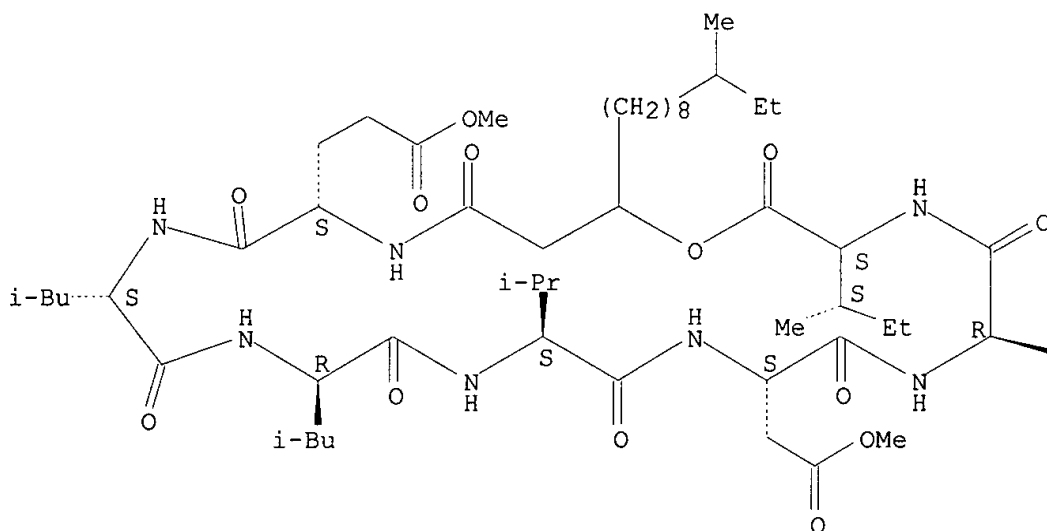
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FS PROTEIN SEQUENCE; STEREOSEARCH  
MF C55 H97 N7 O13  
SR CA  
LC STN Files: CA, CAPLUS

\*\*RELATED SEQUENCES AVAILABLE WITH SEQLINK\*\*

Absolute stereochemistry.

PAGE 1-A



PAGE 1-B

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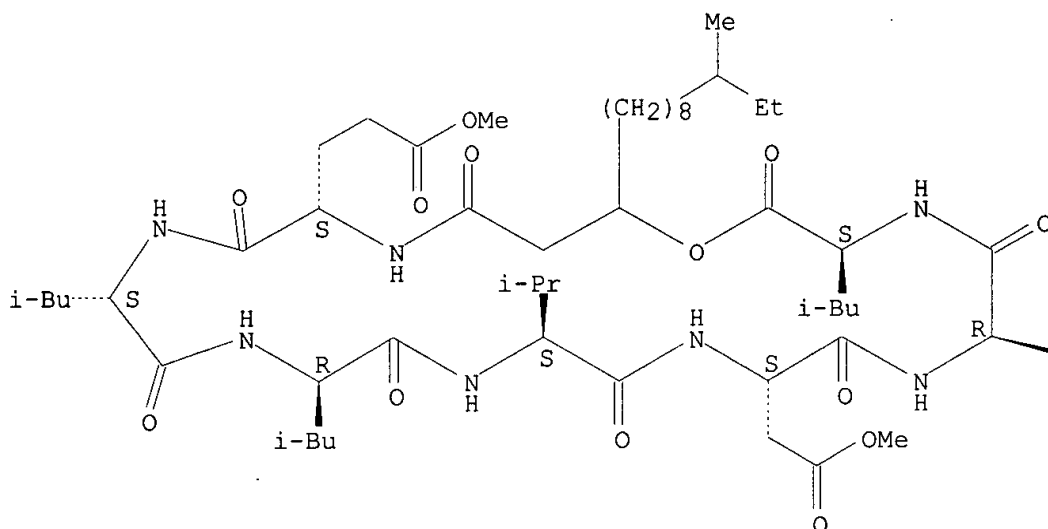
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L31 ANSWER 15 OF 41 REGISTRY COPYRIGHT 2003 ACS  
 RN **213536-15-3** REGISTRY  
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 FS PROTEIN SEQUENCE; STEREOSEARCH  
 MF C55 H97 N7 O13  
 SR CA  
 LC STN Files: CA, CAPLUS

\*\*RELATED SEQUENCES AVAILABLE WITH SEQLINK\*\*

Absolute stereochemistry.

PAGE 1-A



PAGE 1-B

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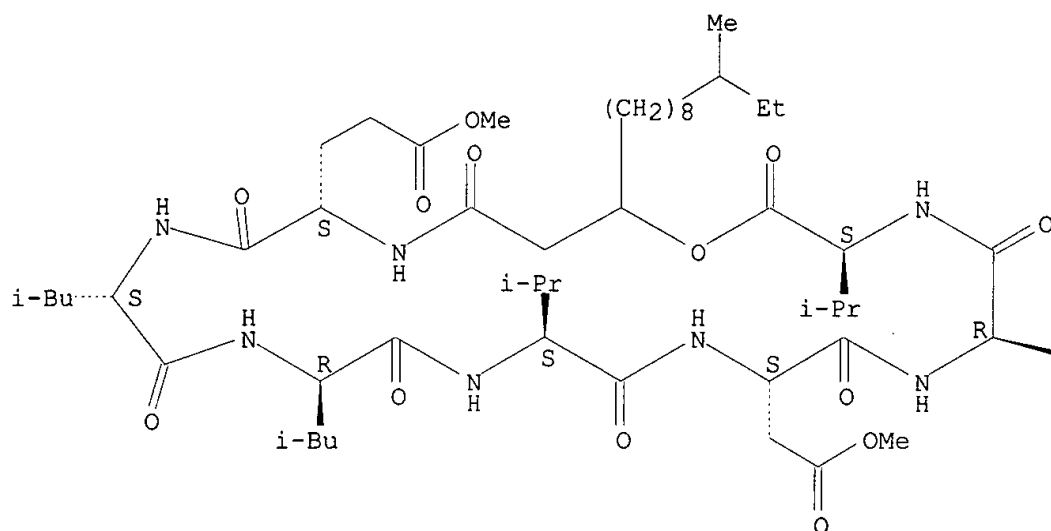
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L31 ANSWER 16 OF 41 REGISTRY COPYRIGHT 2003 ACS  
 RN 213536-14-2 REGISTRY  
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 FS PROTEIN SEQUENCE; STEREOSEARCH  
 MF C54 H95 N7 O13  
 SR CA  
 LC STN Files: CA, CAPLUS

\*\*RELATED SEQUENCES AVAILABLE WITH SEQLINK\*\*

Absolute stereochemistry.

PAGE 1-A



PAGE 1-B

1 REFERENCES IN FILE CA (1957 TO DATE)  
 1 REFERENCES IN FILE CAPLUS (1957 TO DATE)

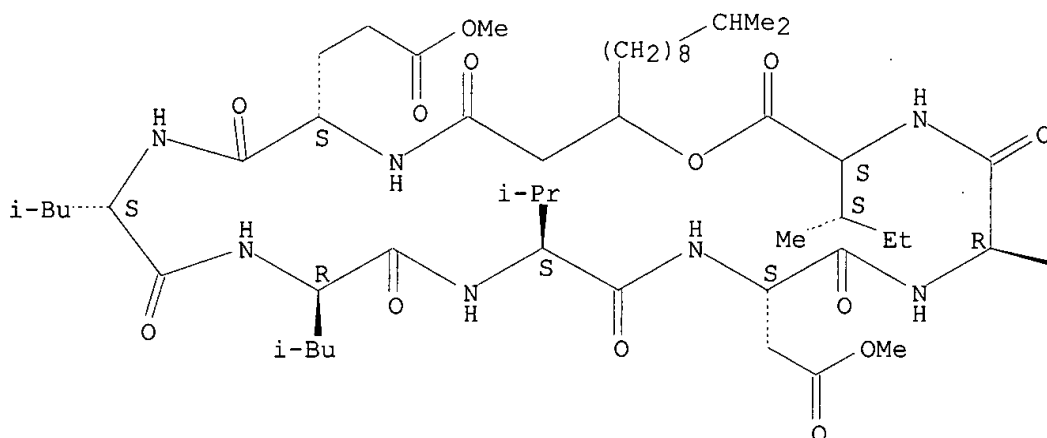
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L31 ANSWER 17 OF 41 REGISTRY COPYRIGHT 2003 ACS  
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 FS PROTEIN SEQUENCE; STEREOSEARCH  
 MF C54 H95 N7 O13  
 SR CA  
 LC STN Files: CA, CAPLUS

\*\*RELATED SEQUENCES AVAILABLE WITH SEQLINK\*\*

Absolute stereochemistry.

PAGE 1-A



PAGE 1-B

Bu-i

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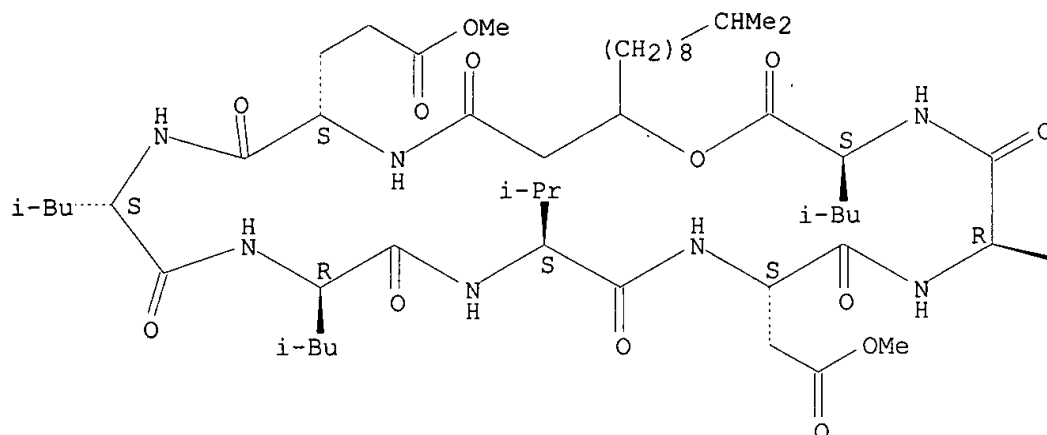
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L31 ANSWER 18 OF 41 REGISTRY COPYRIGHT 2003 ACS  
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 FS PROTEIN SEQUENCE; STEREOSEARCH  
 MF C54 H95 N7 O13  
 SR CA  
 LC STN Files: CA, CAPLUS

\*\*RELATED SEQUENCES AVAILABLE WITH SEQLINK\*\*

Absolute stereochemistry.

PAGE 1-A



PAGE 1-B

Bu-i

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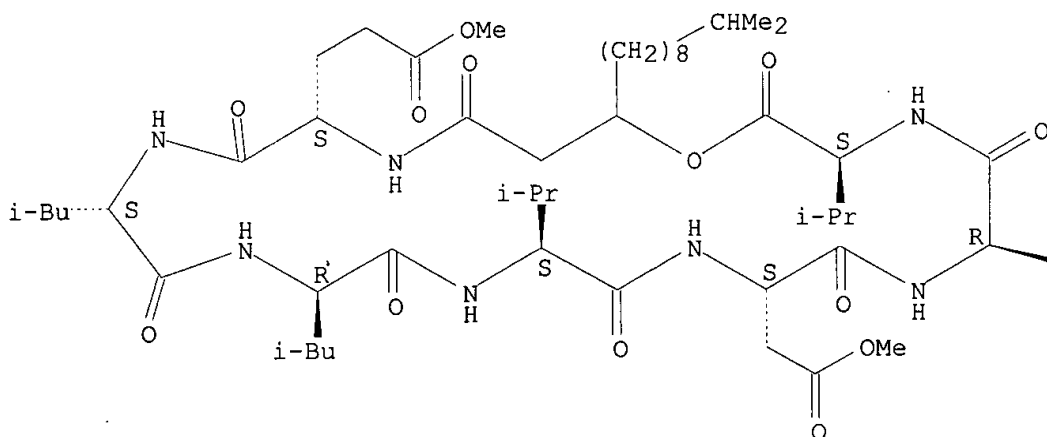
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L31 ANSWER 19 OF 41 REGISTRY COPYRIGHT 2003 ACS  
 RN **213536-08-4** REGISTRY  
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 FS PROTEIN SEQUENCE; STEREOSEARCH  
 MF C53 H93 N7 O13  
 SR CA  
 LC STN Files: CA, CAPLUS

\*\*RELATED SEQUENCES AVAILABLE WITH SEQLINK\*\*

Absolute stereochemistry.

PAGE 1-A



PAGE 1-B

1 REFERENCES IN FILE CA (1957 TO DATE)  
 1 REFERENCES IN FILE CAPLUS (1957 TO DATE)

REFERENCE 1: 129:257424

L31 ANSWER 20 OF 41 REGISTRY COPYRIGHT 2003 ACS

RN **213536-06-2** REGISTRY

CN Cyclo(L-.alpha.-aspartyl-D-leucyl-L-valyl-3-hydroxy-12-methyltridecanoyl-L-.alpha.-glutamyl-L-valyl-D-leucyl-L-valyl), dimethyl ester (9CI) (CA INDEX NAME)

FS PROTEIN SEQUENCE; STEREOSEARCH

MF C52 H91 N7 O13

SR CA

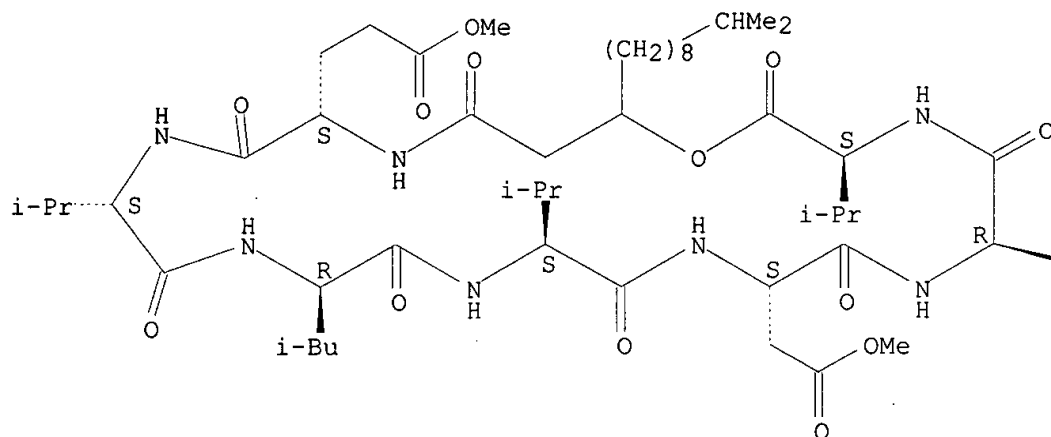
LC STN Files: CA, CAPLUS

\*\*RELATED SEQUENCES AVAILABLE WITH SEQLINK\*\*

Absolute stereochemistry.



PAGE 1-A



PAGE 1-B

Bu-i

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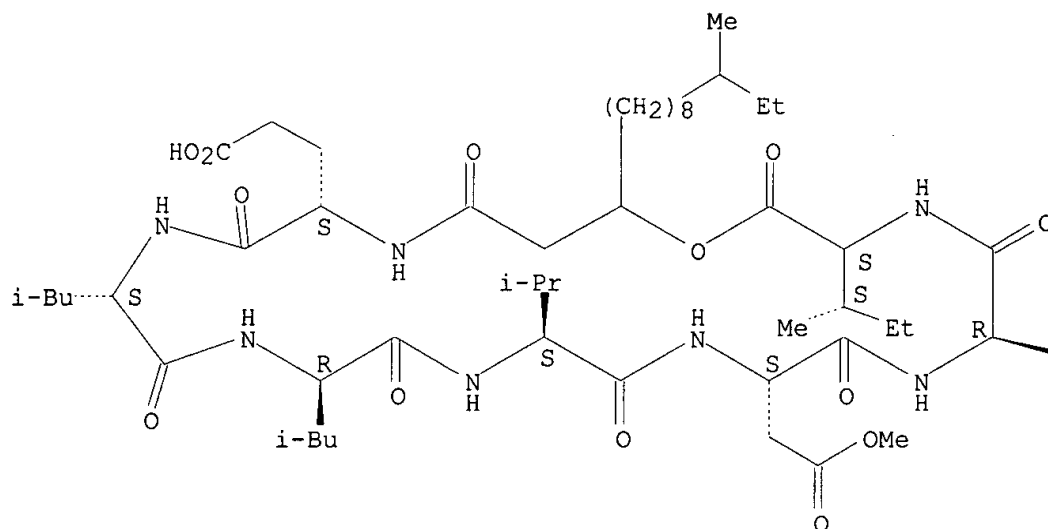
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L31 ANSWER 21 OF 41 REGISTRY COPYRIGHT 2003 ACS  
 RN 213535-99-0 REGISTRY  
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 FS PROTEIN SEQUENCE; STEREOSEARCH  
 MF C54 H95 N7 O13  
 SR CA  
 LC STN Files: CA, CAPLUS

\*\*RELATED SEQUENCES AVAILABLE WITH SEQLINK\*\*

Absolute stereochemistry.

PAGE 1-A



PAGE 1-B

Bu-i

1 REFERENCES IN FILE CA (1957 TO DATE)  
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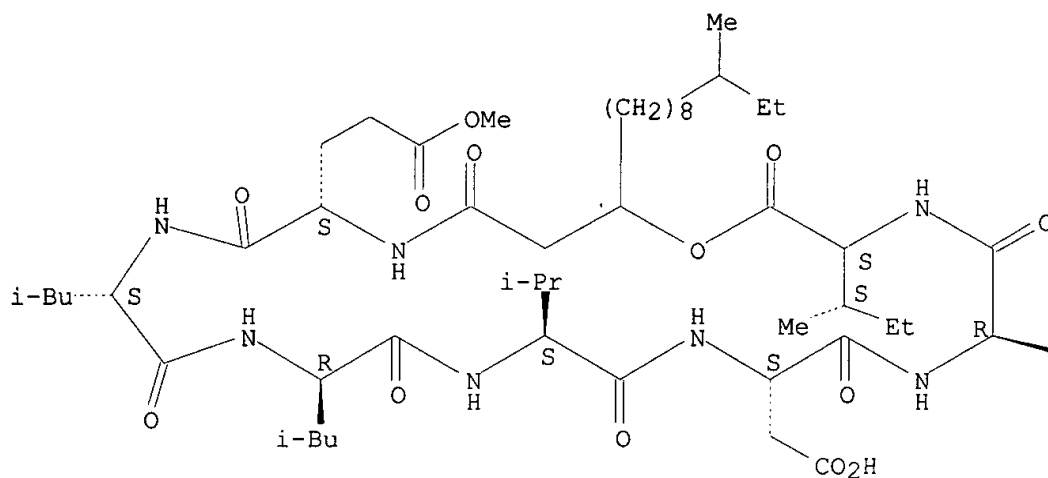
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L31 ANSWER 22 OF 41 REGISTRY COPYRIGHT 2003 ACS  
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 MF C54 H95 N7 O13  
 SR CA  
 LC STN Files: CA, CAPLUS

\*\*RELATED SEQUENCES AVAILABLE WITH SEQLINK\*\*

Absolute stereochemistry.

PAGE 1-A



PAGE 1-B

1 REFERENCES IN FILE CA (1957 TO DATE)  
 1 REFERENCES IN FILE CAPLUS (1957 TO DATE)

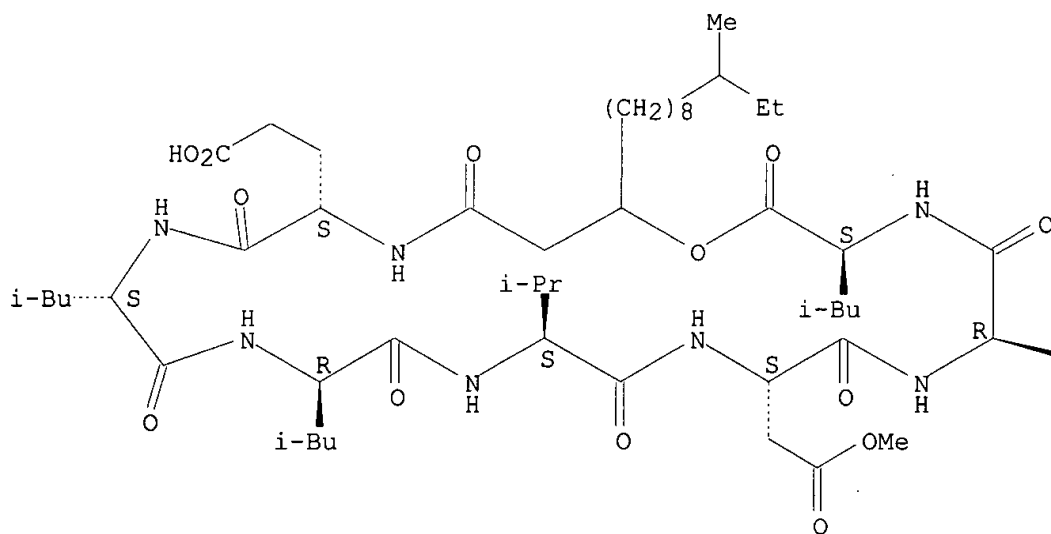
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L31 ANSWER 23 OF 41 REGISTRY COPYRIGHT 2003 ACS  
 RN **213535-96-7** REGISTRY  
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 FS PROTEIN SEQUENCE; STEREOSEARCH  
 MF C54 H95 N7 O13  
 SR CA  
 LC STN Files: CA, CAPLUS

\*\*RELATED SEQUENCES AVAILABLE WITH SEQLINK\*\*

Absolute stereochemistry.

PAGE 1-A



PAGE 1-B

1 REFERENCES IN FILE CA (1957 TO DATE)  
 1 REFERENCES IN FILE CAPLUS (1957 TO DATE)

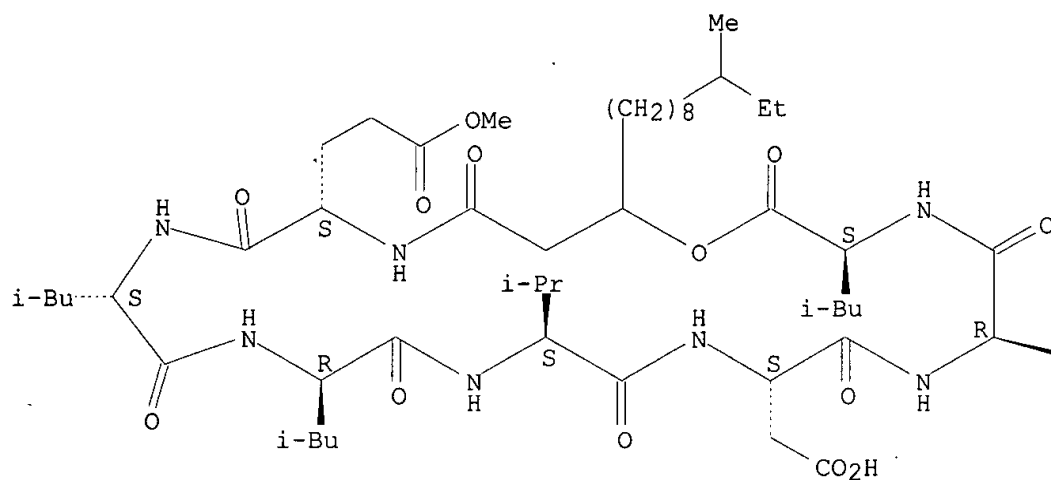
REFERENCE 1: 129:257424

L31 ANSWER 24 OF 41 REGISTRY COPYRIGHT 2003 ACS  
 RN **213535-94-5** REGISTRY  
 CN Surfactin C2, 5-methyl ester (9CI) (CA INDEX NAME)  
 FS PROTEIN SEQUENCE; STEREOSEARCH  
 MF C54 H95 N7 O13  
 SR CA  
 LC STN Files: CA, CAPLUS

**\*\*RELATED SEQUENCES AVAILABLE WITH SEQLINK\*\***

Absolute stereochemistry.

PAGE 1-A



PAGE 1-B

1 REFERENCES IN FILE CA (1957 TO DATE)  
 1 REFERENCES IN FILE CAPLUS (1957 TO DATE)

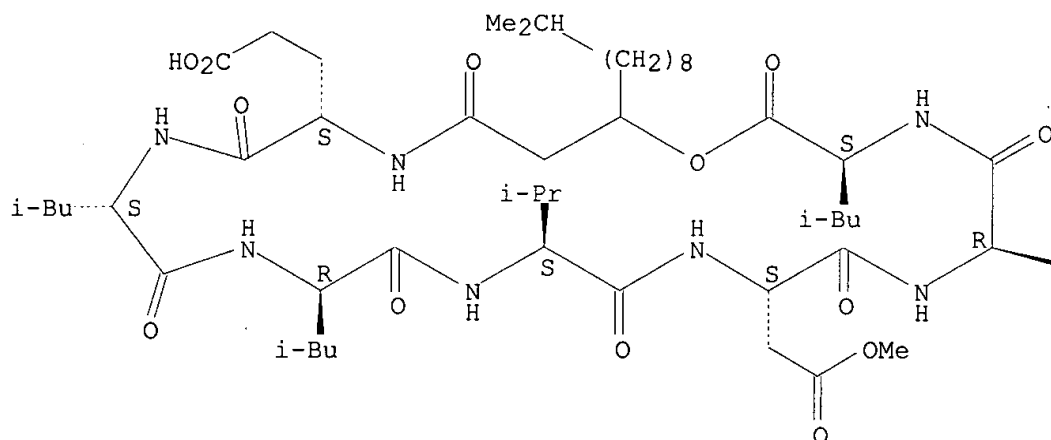
REFERENCE 1: 129:257424

L31 ANSWER 25 OF 41 REGISTRY COPYRIGHT 2003 ACS  
 RN **213535-93-4** REGISTRY  
 CN Surfactin B1, 1-methyl ester (9CI) (CA INDEX NAME)  
 FS PROTEIN SEQUENCE; STEREOSEARCH  
 MF C53 H93 N7 O13  
 SR CA  
 LC STN Files: CA, CAPLUS

\*\*RELATED SEQUENCES AVAILABLE WITH SEQLINK\*\*

Absolute stereochemistry.

PAGE 1-A



PAGE 1-B

Bu-i

1 REFERENCES IN FILE CA (1957 TO DATE)  
 1 REFERENCES IN FILE CAPLUS (1957 TO DATE)

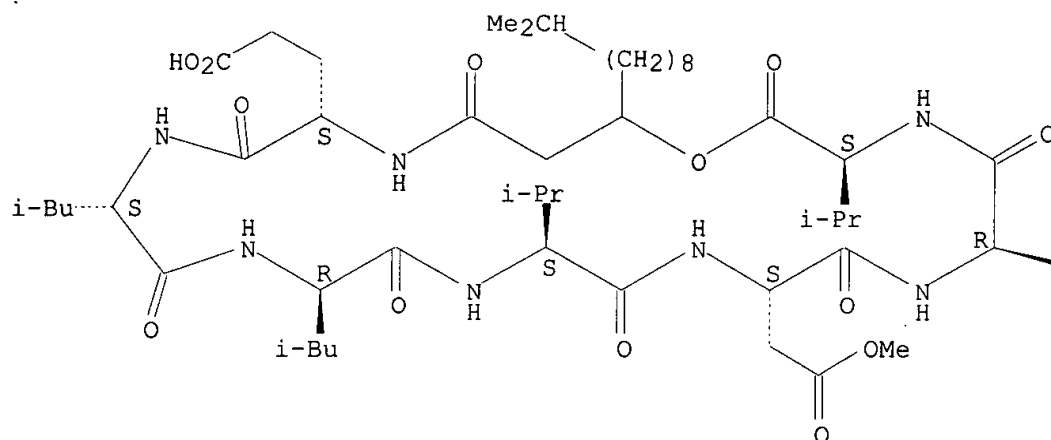
REFERENCE 1: 129:257424

L31 ANSWER 26 OF 41 REGISTRY COPYRIGHT 2003 ACS  
 RN 213535-92-3 REGISTRY  
 CN Surfactin B1, 3-L-valine-, 1-methyl ester (9CI) (CA INDEX NAME)  
 FS PROTEIN SEQUENCE; STEREOSEARCH  
 MF C52 H91 N7 O13  
 SR CA  
 LC STN Files: CA, CAPLUS

\*\*RELATED SEQUENCES AVAILABLE WITH SEQLINK\*\*

Absolute stereochemistry.

PAGE 1-A



PAGE 1-B

1 REFERENCES IN FILE CA (1957 TO DATE)  
 1 REFERENCES IN FILE CAPLUS (1957 TO DATE)

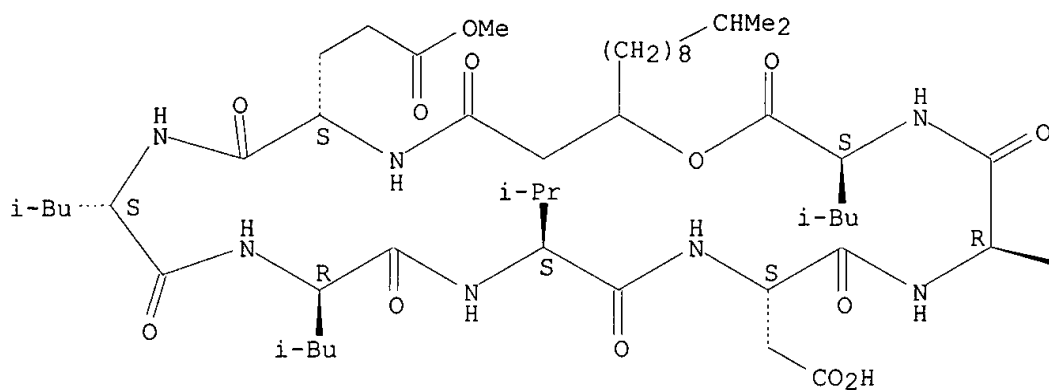
REFERENCE 1: 129:257424

L31 ANSWER 27 OF 41 REGISTRY COPYRIGHT 2003 ACS  
 RN **213535-91-2** REGISTRY  
 CN Surfactin B1, 5-methyl ester (9CI) (CA INDEX NAME)  
 FS PROTEIN SEQUENCE; STEREOSEARCH  
 MF C53 H93 N7 O13  
 SR CA  
 LC STN Files: CA, CAPLUS

\*\*RELATED SEQUENCES AVAILABLE WITH SEQLINK\*\*

Absolute stereochemistry.

PAGE 1-A



PAGE 1-B

1 REFERENCES IN FILE CA (1957 TO DATE)  
 1 REFERENCES IN FILE CAPLUS (1957 TO DATE)

REFERENCE 1: 129:257424

L31 ANSWER 28 OF 41 REGISTRY COPYRIGHT 2003 ACS

RN **213535-90-1** REGISTRY

CN Surfactin B1, 3-L-valine-, 5-methyl ester (9CI) (CA INDEX NAME)

FS PROTEIN SEQUENCE; STEREOSEARCH

MF C52 H91 N7 O13

SR CA

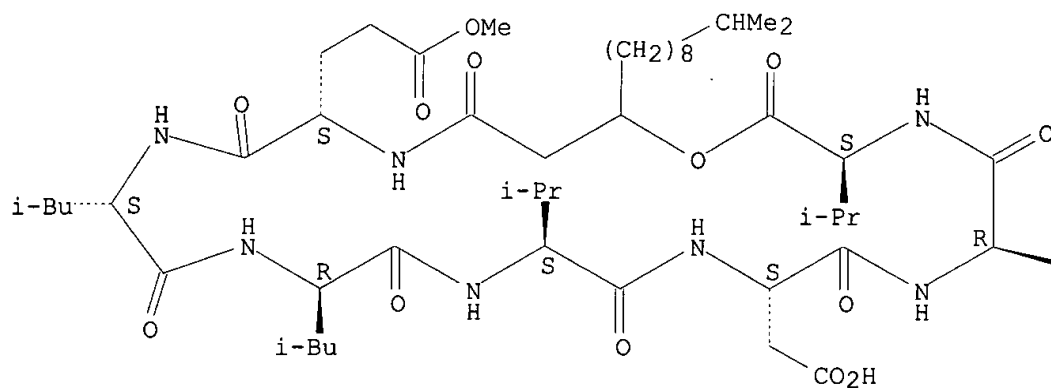
LC STN Files: CA, CAPLUS

\*\*RELATED SEQUENCES AVAILABLE WITH SEQLINK\*\*

Absolute stereochemistry.



PAGE 1-A



PAGE 1-B

Bu-i

1 REFERENCES IN FILE CA (1957 TO DATE)  
 1 REFERENCES IN FILE CAPLUS (1957 TO DATE)

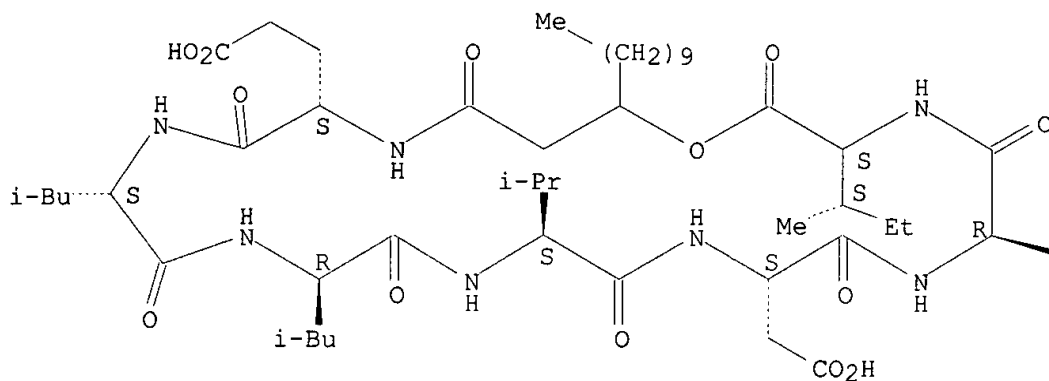
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L31 ANSWER 29 OF 41 REGISTRY COPYRIGHT 2003 ACS  
 RN 213535-84-3 REGISTRY  
 CN Surfactin A3, 3-L-isoleucine- (9CI) (CA INDEX NAME)  
 FS PROTEIN SEQUENCE; STEREOSEARCH  
 MF C51 H89 N7 O13  
 SR CA  
 LC STN Files: CA, CAPLUS

\*\*RELATED SEQUENCES AVAILABLE WITH SEQLINK\*\*

Absolute stereochemistry.

PAGE 1-A



PAGE 1-B

1 REFERENCES IN FILE CA (1957 TO DATE)  
 1 REFERENCES IN FILE CAPLUS (1957 TO DATE)

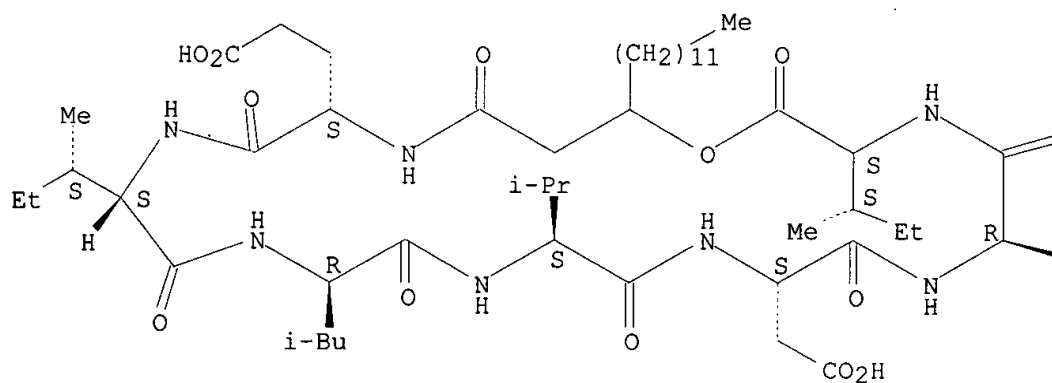
REFERENCE 1: 129:257424

L31 ANSWER 30 OF 41 REGISTRY COPYRIGHT 2003 ACS  
 RN **213535-82-1** REGISTRY  
 CN Cyclo(L-.alpha.-aspartyl-D-leucyl-L-isoleucyl-3-hydroxypentadecanoyl-L-.alpha.-glutamyl-L-isoleucyl-D-leucyl-L-valyl) (9CI) (CA INDEX NAME)  
 FS PROTEIN SEQUENCE; STEREOSEARCH  
 MF C53 H93 N7 O13  
 CI COM  
 SR CA  
 LC STN Files: CA, CAPLUS

\*\*RELATED SEQUENCES AVAILABLE WITH SEQLINK\*\*

Absolute stereochemistry.

PAGE 1-A



PAGE 1-B

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Bu-i

1 REFERENCES IN FILE CA (1957 TO DATE)  
 1 REFERENCES IN FILE CAPLUS (1957 TO DATE)

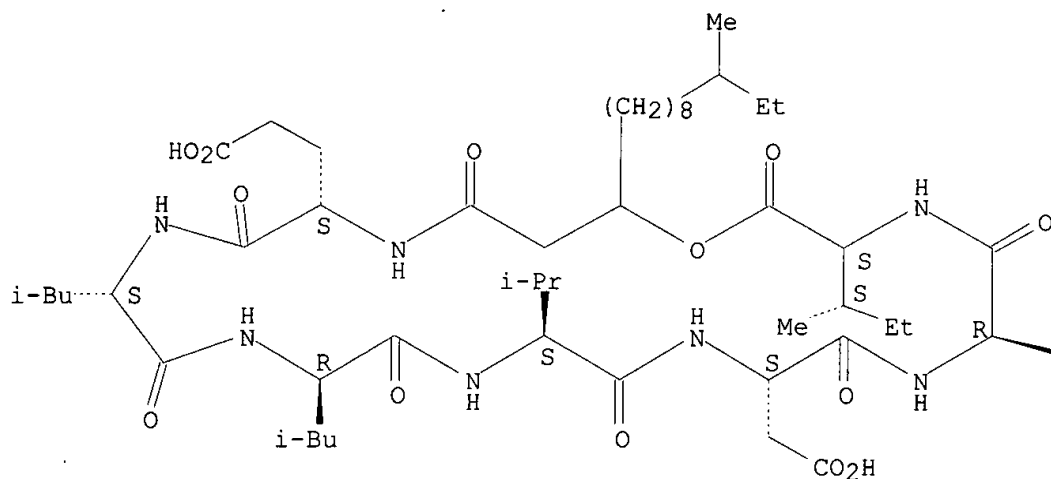
REFERENCE 1: 129:257424

L31 ANSWER 31 OF 41 REGISTRY COPYRIGHT 2003 ACS  
 RN 213535-80-9 REGISTRY  
 CN Cyclo(L-.alpha.-aspartyl-D-leucyl-L-isoleucyl-3-hydroxy-12-methyltetradecanoyl-L-.alpha.-glutamyl-L-leucyl-D-leucyl-L-valyl) (9CI)  
 (CA INDEX NAME)  
 FS PROTEIN SEQUENCE; STEREOSEARCH  
 MF C53 H93 N7 O13  
 SR CA  
 LC STN Files: CA, CAPLUS

\*\*RELATED SEQUENCES AVAILABLE WITH SEQLINK\*\*

Absolute stereochemistry.

PAGE 1-A



PAGE 1-B

i-Bu

1 REFERENCES IN FILE CA (1957 TO DATE)  
 1 REFERENCES IN FILE CAPLUS (1957 TO DATE)

REFERENCE 1: 129:257424

L31 ANSWER 32 OF 41 REGISTRY COPYRIGHT 2003 ACS

RN **213535-78-5** REGISTRY

CN Cyclo(L-.alpha.-aspartyl-D-leucyl-L-valyl-3-hydroxy-12-methyltetradecanoyl-L-.alpha.-glutamyl-L-isoleucyl-D-leucyl-L-valyl) (9CI) (CA INDEX NAME)

FS PROTEIN SEQUENCE; STEREOSEARCH

MF C52 H91 N7 O13

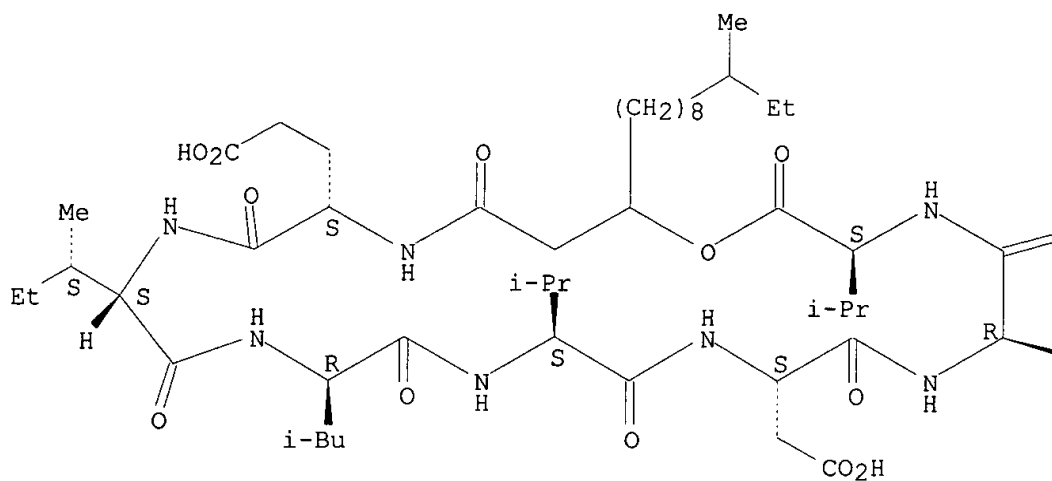
SR CA

LC STN Files: CA, CAPLUS

**\*\*RELATED SEQUENCES AVAILABLE WITH SEQLINK\*\***

Absolute stereochemistry.

PAGE 1-A



PAGE 1-B

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Bu-i

1 REFERENCES IN FILE CA (1957 TO DATE)  
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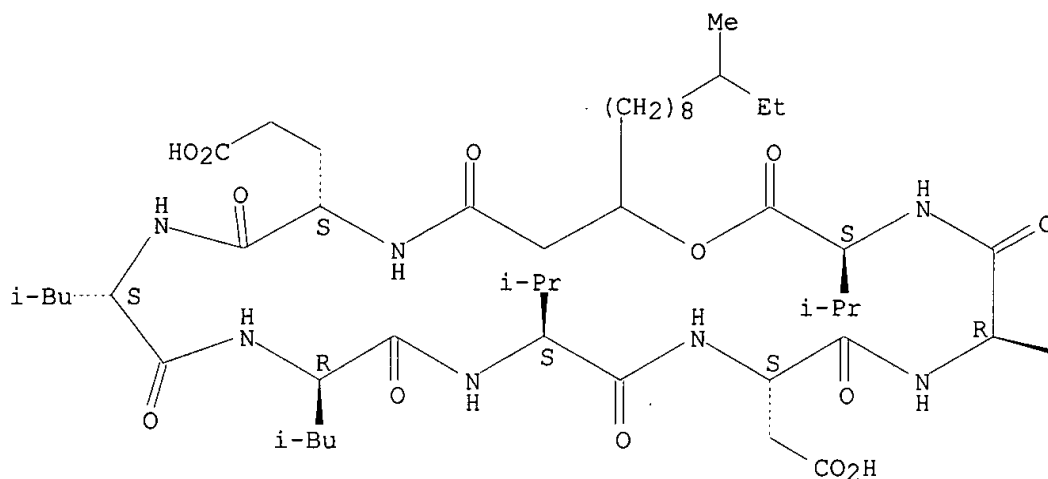
REFERENCE 1: 129:257424

L31 ANSWER 33 OF 41 REGISTRY COPYRIGHT 2003 ACS  
 RN **213535-76-3** REGISTRY  
 CN Surfactin C2, 3-L-valine- (9CI) (CA INDEX NAME)  
 FS PROTEIN SEQUENCE; STEREOSEARCH  
 MF C52 H91 N7 O13  
 CI COM  
 SR CA  
 LC STN Files: CA, CAPLUS

\*\*RELATED SEQUENCES AVAILABLE WITH SEQLINK\*\*

Absolute stereochemistry.

PAGE 1-A



PAGE 1-B

Bu-i

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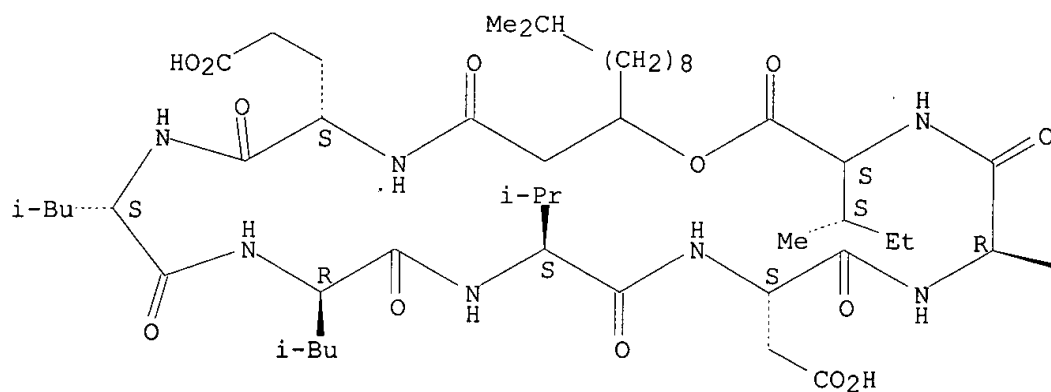
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L31 ANSWER 34 OF 41 REGISTRY COPYRIGHT 2003 ACS  
 RN **213535-74-1** REGISTRY  
 CN Cyclo(L-.alpha.-aspartyl-D-leucyl-L-isoleucyl-3-hydroxy-12-methyltridecanoyl-L-.alpha.-glutamyl-L-leucyl-D-leucyl-L-valyl) (9CI) (CA INDEX NAME)  
 FS PROTEIN SEQUENCE; STEREOSEARCH  
 MF C52 H91 N7 O13  
 SR CA  
 LC STN Files: CA, CAPLUS

\*\*RELATED SEQUENCES AVAILABLE WITH SEQLINK\*\*

Absolute stereochemistry.

PAGE 1-A



PAGE 1-B

1 REFERENCES IN FILE CA (1957 TO DATE)  
 1 REFERENCES IN FILE CAPLUS (1957 TO DATE)

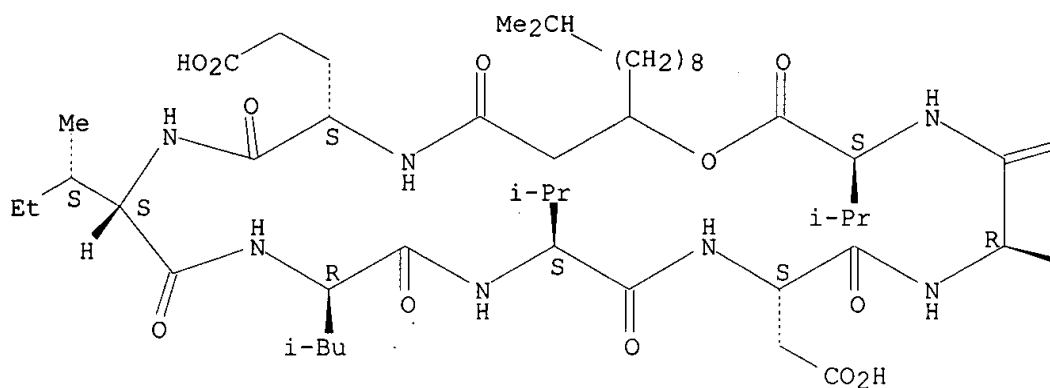
REFERENCE 1: 129:257424

L31 ANSWER 35 OF 41 REGISTRY COPYRIGHT 2003 ACS  
 RN 213535-71-8 REGISTRY  
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 FS PROTEIN SEQUENCE; STEREOSEARCH  
 MF C51 H89 N7 O13  
 SR CA  
 LC STN Files: CA, CAPLUS

\*\*RELATED SEQUENCES AVAILABLE WITH SEQLINK\*\*

Absolute stereochemistry.

PAGE 1-A



PAGE 1-B

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Bu-i

1 REFERENCES IN FILE CA (1957 TO DATE)  
 1 REFERENCES IN FILE CAPLUS (1957 TO DATE)

REFERENCE 1: 129:257424

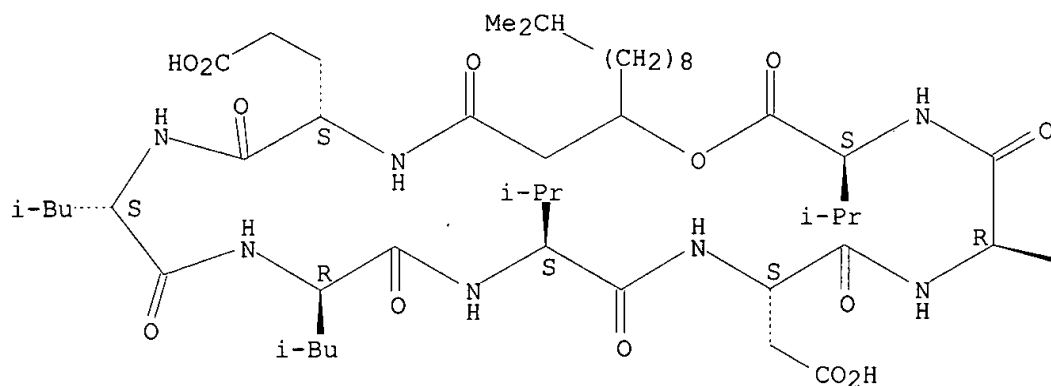
L31 ANSWER 36 OF 41 REGISTRY COPYRIGHT 2003 ACS  
 RN 213535-69-4 REGISTRY  
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 FS PROTEIN SEQUENCE; STEREOSEARCH  
 MF C51 H89 N7 O13  
 SR CA  
 LC STN Files: CA, CAPLUS

\*\*RELATED SEQUENCES AVAILABLE WITH SEQLINK\*\*

Absolute stereochemistry.



PAGE 1-A



PAGE 1-B

Bu-i

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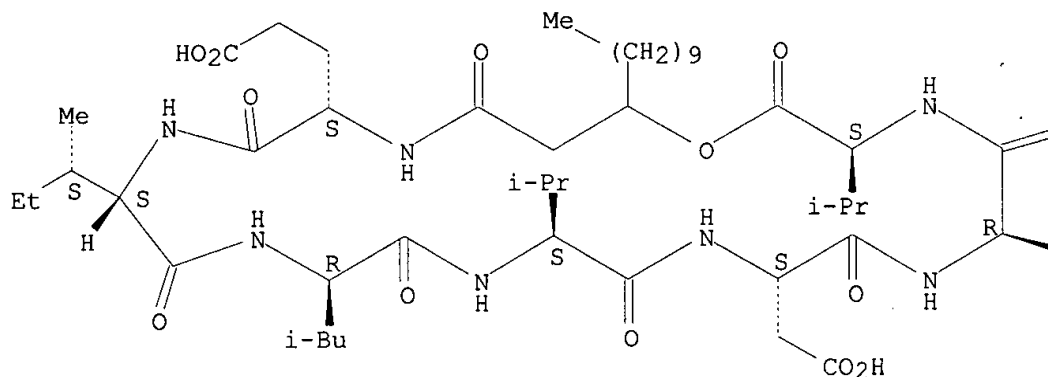
REFERENCE 1: 129:257424

L31 ANSWER 37 OF 41 REGISTRY COPYRIGHT 2003 ACS  
 RN 213535-66-1 REGISTRY  
 CN Cyclo(L-.alpha.-aspartyl-D-leucyl-L-valyl-3-hydroxytridecanoyl-L-.alpha.-glutamyl-L-isoleucyl-D-leucyl-L-valyl) (9CI) (CA INDEX NAME)  
 FS PROTEIN SEQUENCE; STEREOSEARCH  
 MF C50 H87 N7 O13  
 CI COM  
 SR CA  
 LC STN Files: CA, CAPLUS

\*\*RELATED SEQUENCES AVAILABLE WITH SEQLINK\*\*

Absolute stereochemistry.

PAGE 1-A



PAGE 1-B

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=Bu-i

1 REFERENCES IN FILE CA (1957 TO DATE)  
 1 REFERENCES IN FILE CAPLUS (1957 TO DATE)

REFERENCE 1: 129:257424

L31 ANSWER 38 OF 41 REGISTRY COPYRIGHT 2003 ACS

RN 136109-79-0 REGISTRY

CN Surfactin B1 (9CI) (CA INDEX NAME)

OTHER CA INDEX NAMES:

CN 1-Oxa-4,7,10,13,16,19,22-heptaazacyclopentacosane, cyclic peptide deriv.

CN Surfactin, 1-[N-(3-hydroxy-12-methyl-1-oxotridecyl)-L-glutamic acid]-

OTHER NAMES:

CN Cyclo(L-.alpha.-aspartyl-D-leucyl-L-leucyl-3-hydroxy-12-methyltridecanoyl-L-.alpha.-glutamyl-L-leucyl-D-leucyl-L-valyl)

CN K 26

FS PROTEIN SEQUENCE; STEREOSEARCH

DR 122555-26-4

MF C52 H91 N7 O13

CI COM

SR CA

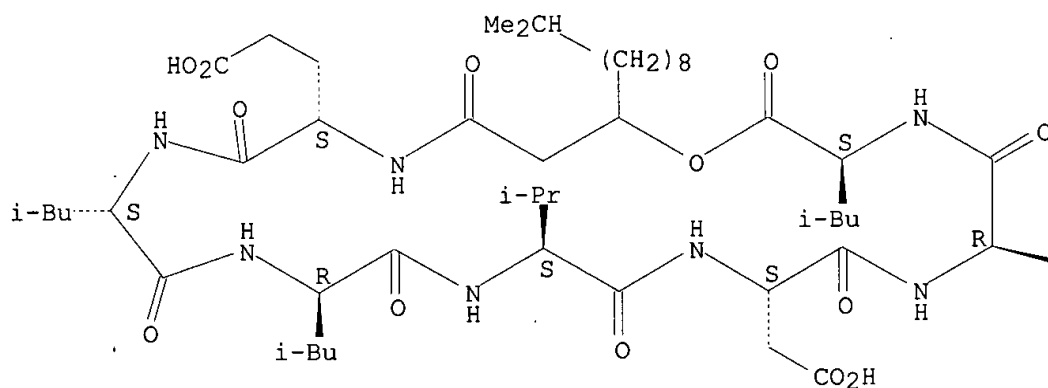
LC STN Files: CA, CAPLUS

\*\*RELATED SEQUENCES AVAILABLE WITH SEQLINK\*\*

Absolute stereochemistry.

Currently available stereo shown.

PAGE 1-A



PAGE 1-B

Bu-i

4 REFERENCES IN FILE CA (1957 TO DATE)  
 4 REFERENCES IN FILE CAPLUS (1957 TO DATE)

REFERENCE 1: 129:257424

REFERENCE 2: 124:4597

REFERENCE 3: 119:221057

REFERENCE 4: 115:130233

L31 ANSWER 39 OF 41 REGISTRY COPYRIGHT 2003 ACS

RN 136109-78-9 REGISTRY

CN Surfactin, 3-L-isoleucine- (9CI) (CA INDEX NAME)

OTHER CA INDEX NAMES:

CN 1-Oxa-4,7,10,13,16,19,22-heptaazacyclopentacosane, cyclic peptide deriv.

CN Surfactin, 7-L-isoleucine-

OTHER NAMES:

CN Surfactin A

FS PROTEIN SEQUENCE

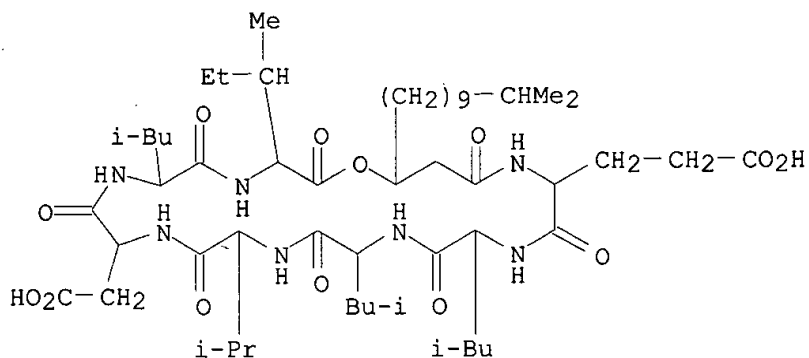
DR 139389-36-9

MF C53 H93 N7 O13

SR CA

LC STN Files: BIOSIS, CA, CAPLUS, CASREACT

\*\*RELATED SEQUENCES AVAILABLE WITH SEQLINK\*\*



5 REFERENCES IN FILE CA (1957 TO DATE)  
5 REFERENCES IN FILE CAPLUS (1957 TO DATE)

REFERENCE 1: 135:118640

REFERENCE 2: 135:58026

REFERENCE 3: 121:102344

REFERENCE 4: 119:221057

REFERENCE 5: 115:130233

L31 ANSWER 40 OF 41 REGISTRY COPYRIGHT 2003 ACS

RN **86711-55-9** REGISTRY

CN Surfactin C2 (9CI) (CA INDEX NAME)

OTHER CA INDEX NAMES:

CN 1-Oxa-4,7,10,13,16,19,22-heptaazacyclopentacosane, cyclic peptide deriv.

CN Surfactin, 1-[N-(3-hydroxy-12-methyl-1-oxotetradecyl)-L-glutamic acid]-

OTHER NAMES:

CN Cyclo(L-.alpha.-aspartyl-D-leucyl-L-leucyl-3-hydroxy-12-methyltetradecanoyl-L-.alpha.-glutamyl-L-leucyl-D-leucyl-L-valyl)

FS PROTEIN SEQUENCE; STEREOSEARCH

DR 171039-18-2

MF C53 H93 N7 O13

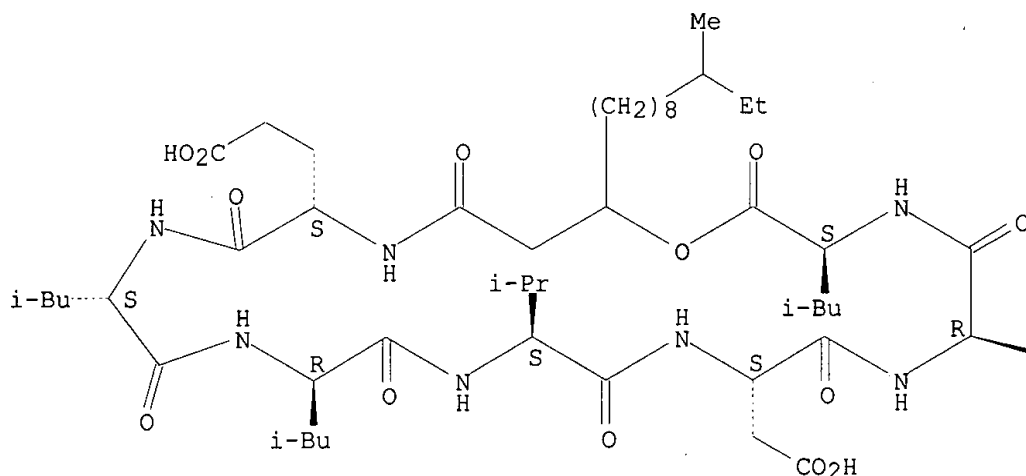
LC STN Files: CA, CAPLUS

\*\*RELATED SEQUENCES AVAILABLE WITH SEQLINK\*\*

Absolute stereochemistry.

Currently available stereo shown.

PAGE 1-A



PAGE 1-B

Bu-i

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 3 REFERENCES IN FILE CAPLUS (1957 TO DATE)

REFERENCE 1: 129:257424

REFERENCE 2: 101:209082

REFERENCE 3: 99:84213

L31 ANSWER 41 OF 41 REGISTRY COPYRIGHT 2003 ACS

RN 24730-31-2 REGISTRY

CN Surfactin C1 (9CI) (CA INDEX NAME)

OTHER CA INDEX NAMES:

CN 1-Oxa-4,7,10,13,16,19,22-heptaazacyclopentacosane, cyclic peptide deriv.

CN Leucine, N-[N-[N-[N-[N-[N-(3-hydroxy-13-methyltetradecanoyl)-L-.alpha.-glutamyl]-L-leucyl]-D-leucyl]-L-valyl]-L-.alpha.-aspartyl]-D-leucyl]-, .psi.-lactone, L- (8CI)

OTHER NAMES:

CN Cyclo(L-.alpha.-aspartyl-D-leucyl-L-leucyl-3-hydroxy-13-methyltetradecanoyl-L-.alpha.-glutamyl-L-leucyl-D-leucyl-L-valyl)

CN Surfactin

FS PROTEIN SEQUENCE; STEREOSEARCH

REFERENCE 9: 136:330564

REFERENCE 10: 136:330527



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Indexing Officer: AKABIA - ABDUL KABIA  
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Dossier: 09242343

Legal Date: 05-07-2003

No.	Doccode	Number of pages
1	SRNT	10

Total number of pages: 10

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